

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ gas ☐
well well other

2. NAME OF OPERATOR

Page Petroleum Inc.

3. ADDRESS OF OPERATOR

Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 1951 FNL - 2196 FEL

AT TOP PROD. INTERVAL: Same

AT TOTAL DEPTH: Same

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐CHANGE ZONES ☐ABANDON* ☐

(other) Move proposed Location

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Move location to the following due to interference with Indian irrigation system.

1522 FEL - 735 FNL, Sec. 14, T2S, R1E, U.S.M.

APPROVED BY THE DIVISION
OF OIL, GAS, AND MINING
DATE: 9/5/80
BY: CB Light

Subsurface Safety Valve: Manu. and Type _____

Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Kenneth Allen TITLE District Manager DATE _____

(This space for Federal or State office use)

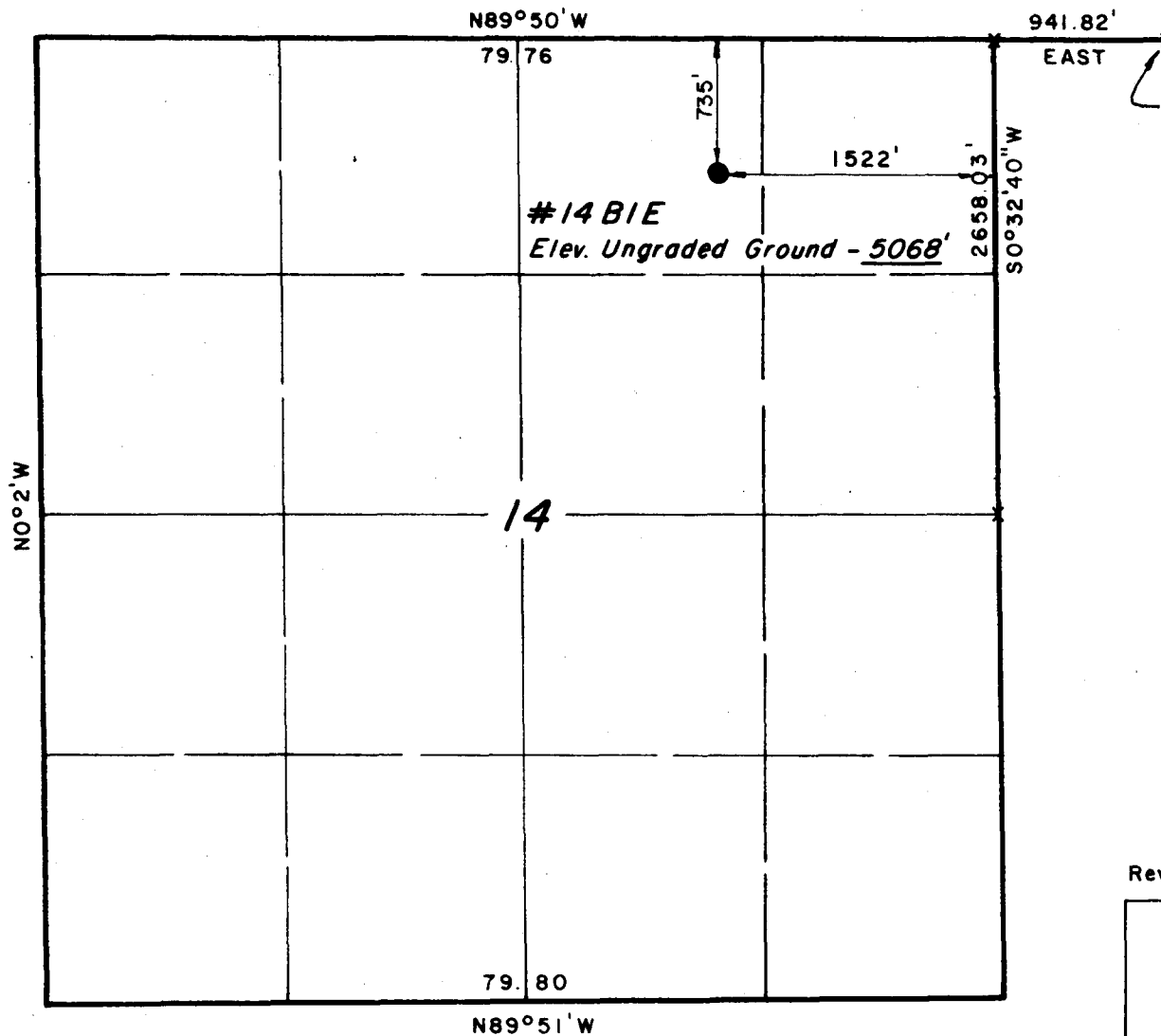
APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____ DATE _____

T2S, R1E, U.S.B.&M.

PROJECT
PAGE PETROLEUM INC.

Well location #14 B/E located as shown in the NW 1/4 NE 1/4 Section 14, T2S, R1E, U.S.B.&M., Uintah County, Utah.



SE Corner of Lot 2, Section 12, T2S, R1E, U.S.B.&M., Uintah County, Utah.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

June Stewart

REGISTERED LAND SURVEYOR
REGISTRATION NO 3154
STATE OF UTAH

Revised 7/30/80

UINTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q - 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE	1" = 1000'	DATE	6/23/80
PARTY	MS KH DF AW	REFERENCES	GLO Plat
WEATHER	Fair	FILE	PAGE PETROLEUM

X = Section Corners Located

EXHIBIT "A"

TEN POINT COMPLIANCE PROGRAM

NTL 6

Attached to Form 9-331C

WELL NAME: 1-14-B1E

LOCATION: Section 14, T2S, R1E, U.S.M.

Uintah County, STATE OF Utah

1. GEOLOGIC SURFACE FORMATION

Tertiary Uinta Formation

2. ESTIMATED TAPE OF IMPORTANT GEOLOGIC MARKERS

TGR 1 Uinta 0-6000'

TGR 2 Green River 6000'

TGR 3 Wasatch 10700'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS or MINERALS

Water - 0' - 6000'

Oil & Gas - 6000' - 10,700 G.R. - 10,700 - T.D. Wasatch Oil & Gas

4. PROPOSED CASING PROGRAM

(a) Surface Casing: 10 3/4 to 100' 40.5# J-55 Cement to Surface
7 5/8" to 9,850' 29.7# N-80

(b) Production Casing: 5 1/2" 9850 to T.D. 17.0# N-80
Cemented to lap

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

EXHIBIT "B" Is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to the full working pressure after nipping up and after any use under pressure. Pipe rams will be operationally checked each 24- hr. period, as will blind rams each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP include a kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

Attached to Form 9-331C - Continued

6. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATING MUDS

0 - 7000' - Brine Water
7000 - T.D. - Fresh Gel Mud.

7. AUXILIARY EQUIPMENT TO BE USED

5000# WP Safety Valve, inside BOP, Upper Kelly Cock, Mud
Monitoring Equipment (See Exhibit "A")

8. TESTING, LOGGING AND CORING PROGRAMS

- (a) Tests: No DST's
- (b) Logging Program:
 - DIL, SP, GR 800' - 10,700'
 - DIL, CNL, GR-CAL, T.D.
 - DIL, SP, CNL, FDC, GR-CAL 10,700' - T.D.
- (c) Coring: No Cores
- (d) Production:
 - If production is obtained, producing formation will be selectively perforated and treated.

9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE

No abnormal pressure or temperature are anticipated.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS

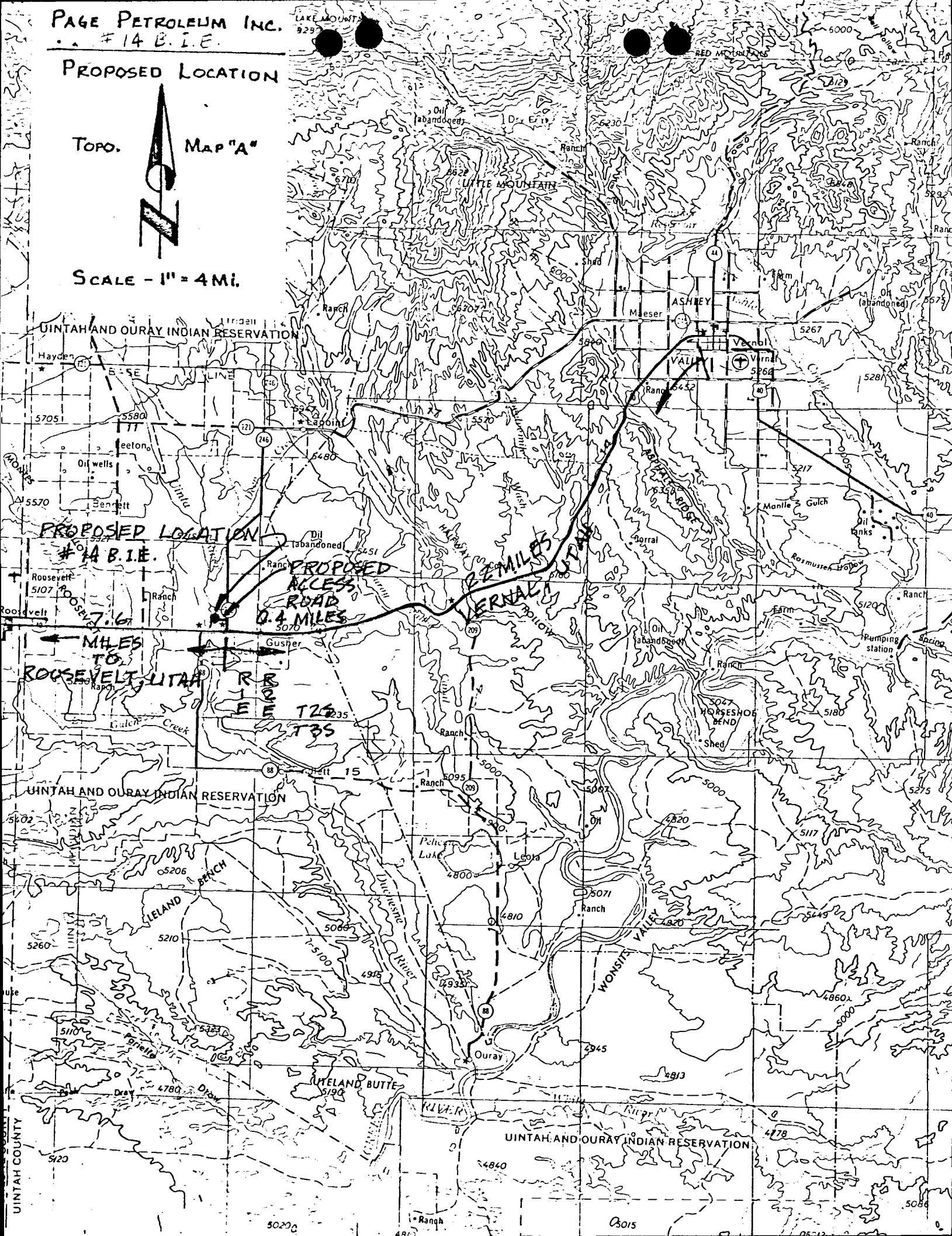
The anticipated*starting date is to be approximately
or as soon as possible after examination and approval of
drilling requirements. Operations should be completed within
90 days from spudding to rig release.

PROPOSED LOCATION

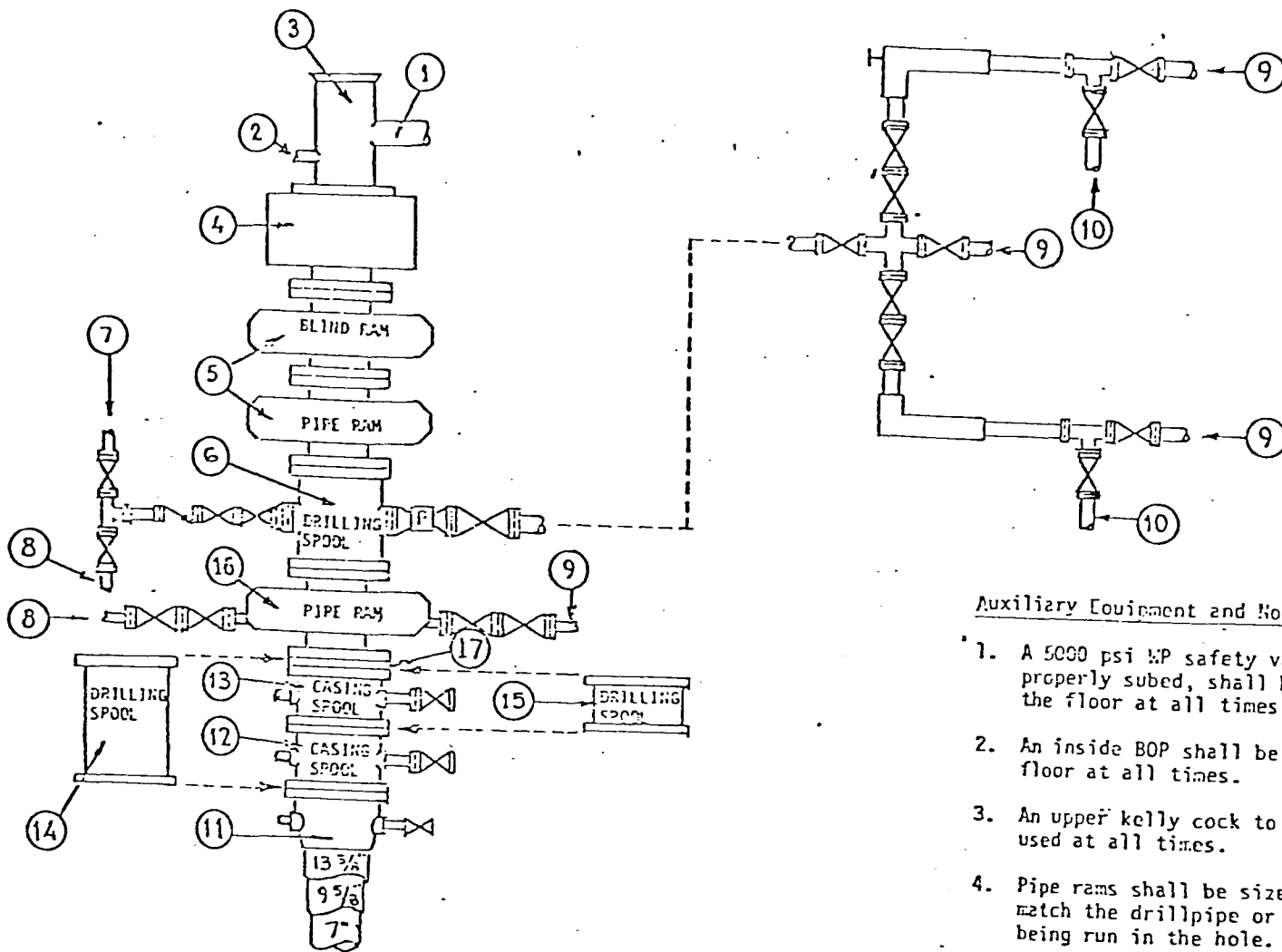
TOPO. MAP "A"



SCALE - 1" = 4 MI.



PREVENTION, WELLHEAD, AND AUXILIARY
EQUIPMENT



Auxiliary Equipment and Notes:

1. A 5000 psi BOP safety valve, properly subed, shall be on the floor at all times.
2. An inside BOP shall be on the floor at all times.
3. An upper Kelly cock to be used at all times.
4. Pipe rams shall be sized to match the drillpipe or casing being run in the hole.
5. Mud system monitoring equipment will be installed (with derrick floor indicators) and used throughout the period of drilling after mud up or upon reaching a depth at which abnormal pressures could occur.
6. BOP equipment shall be pressure tested upon installation and periodically thereafter. Operational test of ram type preventers shall be performed on each trip.

Item No.	Description
1	Mud return flow line
2	Fillup line - min. 2"
3	Drilling Nipple
4	13-5/8" - 5000 psi WP-Annular Bag Type BOP - Shafter or Hydral
5	Two single or one dual - hydraulically operated - 13-5/8" - 5000 psi WP - Ram Type BOP - Cameron Type U or Shafter LHS
6	13-5/8" - 5000 psi WP Drilling Spool
7	To mud pumps
8	To remote pump in station
9	To burn pit
10	To gas buster
11	12" - 3000 psi WP-Sltn On and Weld-Casing Head
12	12" - 3000 psi WP x 10" - 5000 psi WP Casing Spool
13	10" - 5000 psi WP x 10" - 5000 psi WP Casing Spool
14	12" - 3000 psi WP x 13-5/8" - 5000 psi WP Drilling Spool - White Drilling 12-1/4" hole
15	10" - 5000 psi WP x 10" - 5000 psi WP Drilling Spool - White Drilling 8-3/4" hole
16	13-5/8" - 5000 psi - Hydraulically Operated - Cameron Type U - Ram Type BOP
17	13-5/8" - 5000 psi WP x 10" - 5000 psi WP Double Studded Adapter Flange

Well Name

Field

County

State UTAH

Attachment No. EXHIBIT "B"

PAGE PETROLEUM INC.
13 Point Surface Use Plan
for
Well Location
1-14-B1E
Located In
Section 14, T2S, R1E, U.S.B. & M.
Uintah County, Utah

PAGE PETROELUM INC.

1-14-B1E

Section 14, T2S, R1E, U.S.B. & M.

1. EXISTING ROADS

See attached Topographic Map "A".

To reach Page Petroleum Inc., well location site 1-14-B1E, located in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14, T2S, R1E, U.S.B. & M., Uintah County, Utah:

Proceed Easterly out of Roosevelt, Utah, along U.S. Highway 40 - 8 miles to its junction with Utah State Highway 246 to the North; proceed Northerly along this Highway 0.6 miles to its junction with the beginning of the proposed access road (to be discussed in item #2).

The Highways mentioned in the foregoing paragraph are bituminous surfaced roads. The dirt road is constructed out of materials acquired during its construction.

There is no anticipated construction on any portion of the above described roads. They will meet the necessary standards required to facilitate an orderly flow of traffic during the drilling phase, completion phase, and the production phase of this well at such time that production is established.

The roads that are required for access during the drilling phase, completion phase, and production phase of this well, are maintained by Utah State Road Crews and will require no maintenance by Page Petroleum Inc.

2. PLANNED ACCESS ROAD

See Topographic Map "B".

The proposed access road leaves the existing road described in Item #1 in the East side of Section 14, T2S, R1E, U.S.B. & M. and proceeds in a Westerly direction 0.4 miles to the proposed location site.

In order to facilitate the anticipated traffic flow necessary to drill and produce this well, the following standards will be met:

The proposed access road will be an 18' crown road (9' either side of the centerline) with drain ditches along either side of the proposed road where it is determined necessary in order to handle any runoff from normal meteorological conditions that are prevalent to this area.

Back slopes along the cut areas of the road will be 1 $\frac{1}{2}$ to 1 slopes and terraced.

The road will be centerline flagged prior to the commencement of construction.

There will be no culverts required along this access road.

2. PLANNED ACCESS ROAD - cont...

The grade along this road is relatively flat. However, the maximum grade will not exceed 8%. This road will be constructed using native borrow materials accumulated during its construction.

There will be no turnouts installed.

Any fences that are encountered along this road will be cut and replaced with a cattleguard with a minimum width of 18' and a loading factor large enough to facilitate the heavy trucks required in the drilling and production of this well.

If cattleguards are to be located at existing gates, they will be installed with the above requirements and with a new gate installed at one end of the cattleguard.

The access from the road to the gate will be of such a nature that there will be no impedance of traffic flow along the main access road and no difficulties encountered by traffic utilizing the gate, either leaving or entering the proposed access road.

The terrain that this access road traverses is relatively flat.

The vegetation of this route consists of pasture grass.

All surface disturbance is on Tribal Land.

3. EXISTING WELLS

There are no water wells, abandoned wells, temporarily abandoned wells, producing wells, disposal wells, drilling wells, shut in wells, injection wells, monitoring or observation wells for other resources located within a one-mile radius of this location site.

4. LOCATION OF TANK BATTERIES, PRODUCTION FACILITIES, AND PRODUCTION GATHERING AND SERVICE LINES

At the present time there are no Page Petroleum Inc. production facilities, gas gathering lines, tank batteries, oil gathering lines, injection lines, or disposal lines within a one-mile radius.

In the event that production of this well is established the existing area of the location will be utilized for the establishment of the necessary production facilities.

The total area that is needed for the production of this well will be fenced and cattleguards will be utilized for access to these facilities.

4. LOCATION OF TANK BATTERIES, PRODUCTION FACILITIES, PRODUCTION GATHERING AND SERVICE LINES - cont...

The area will be built if possible, with native materials and if these materials are not available then the necessary arrangements will be made to get them from private sources. Bulldozers, graders and workman crews will be used to construct and place these facilities in the event production is established.

If there is any deviation from the above, all appropriate agencies will be notified.

Rehabilitation of disturbed areas no longer needed for operations after construction is completed will meet the requirements of Item #10.

5. LOCATION AND TYPE OF WATER SUPPLY

See Topographic Map "A".

Water to be used for the drilling and production of this well will be hauled from the Uinta River at an existing loading ramp in Section 22, T2S, R1E, U.S.B. & M. approximately 2 miles South of the location site. This water will be hauled by truck over existing roads and the proposed access road.

All regulations and guidelines will be followed and no deviations will be made unless all concerned agencies are notified.

There will be no water well drilled at this location site.

6. SOURCE OF CONSTRUCTION MATERIALS

All construction materials for this location site and access road shall be borrow material accumulated during construction of the location site and access road. No additional road gravels or pit lining material from other sources are anticipated at this time, but if they are required, the appropriate actions will be taken to acquire them from private sources.

The native material that will be used in the construction of this location site and access road will consist of sandy-clay soil and sandstone and shale material gathered in actual construction of the road and location.

7. METHODS FOR HANDLING WASTE DISPOSAL

A reserve pit shall be constructed, and at least half of the depth of the reserve pit shall be below the existing ground surface. Non-flammable material such as cuttings, salts, chemicals etc., will be buried in the reserve pit and covered with a minimum of four feet of earth material. Prior to the onset of drilling, the burn pit will be fenced on three sides. Upon completion of drilling the fourth side of the reserve pit will be fenced and allowed to dry completely before backfilling and reclamation are attempted.

7. METHODS FOR HANDLING WASTE DISPOSAL - cont...

All trash will be contained in a portable trash basket and will be hauled to the nearest sanitary landfill.

A portable chemical toilet will be supplied for human waste.

All produced oil from this well will be contained in the storage tank and will be sold. Water if any which is produced will be run into a reserve pit as required in the NTL-2B Regulations.

8. ANCILLARY FACILITIES

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. WELL SITE LAYOUT

See attached location layout sheet.

The B.I.A. Representative shall be notified before any construction begins on the proposed location site and road.

As mentioned in Item #7, the pits will be unlined unless it is determined by the representatives of the agencies involved that the materials are too porous and would cause contamination to the surrounding area; then the pits will be lined with a gel and any other type of material necessary to make it safe and tight.

When drilling activities commence, all work shall proceed in a neat and orderly sequence.

10. PLANS FOR RESTORATION OF SURFACE

As there is some topsoil on the location site, all topsoil shall be stripped and stockpiled. (See location layout sheet). When all drilling and production activities have been completed, the location site and access road will be reshaped to the original contour and stockpiled topsoil spread over the disturbed area. Fences around pits are to be removed upon completion of drilling activities. The reserve pit will be completely fenced and allowed to dry before covering. When restoration activities have been completed, the location site and access ramp shall be reseeded with a seed mixture recommended by the B.L.M. District Manager when the moisture content of the soil is adequate for germination. The Lessee further covenants and agrees that all of said cleanup and restoration activities shall be done and performed in a diligent and most workmanlike manner and in strict conformity with the above mentioned Items #7 and #10.

11. OTHER INFORMATION

The Topography of the General Area - (See Topographic Map "A").

The area slopes from the Uinta Mountains to the North to the Book Cliff Mountains to the South and is part of what is known as the Uintah Basin. The area has numerous perennial drainages which flow to the South out of the Uinta Mountains into the Green River to the South. The Uinta River is one of these perennial streams which drains to the South and is approximately 2000' West of this location site.

The soils of this semi-arid area are of the Uinta Formation and Duchesne River Formation (the Fluvial Sandstone and Mudstone) from the Eocene Epoch and Quaternary Epoch (gravels surfaces) and visible geologic structure consists of light brownish-gray clays (OL) to sandy soils (SM-ML) with poor gravels and shales with outcrops of rock (sandstone, mudstone, conglomerates, and shales).

Due to the low precipitation average, climatic conditions and the marginal types of soils, the vegetation that is found in the area are common of the semi-arid region we are located in and in the lower elevations of the Uinta Basin. It consists of, as primary flora, areas of sagebrush, rabbitbrush, some grasses, and cacti, and large area of bare soils devoid of any growth in the areas away from and in the vicinity of non-perennial streams, cottonwood, willows, tamarack, sagebrush, rabbitbrush, grasses and cacti can be found.

The fauna of the area is sparse and consists predominantly of the mule deer, coyotes, pronghorn antelope, rabbits, and varieties of small ground squirrels and other types of rodents, and various reptiles common to this area.

The birds of the area are raptors, finches, ground sparrows, magpies, crows and jays.

The area is used by man for the primary purpose of grazing domestic livestock.

The Topography of the Immediate Area - (See Topographic Map "B").

Well location 1-14-B1E sits on a flat area, which has been cultivated. The vegetation at the present is pasture grass. The ground slopes to the West into the Uinta River. The ground slopes at approximately a 2% grade through the location site.

The total surface ownership effected by this location is owned by the Ute Tribe.

There are dwellings within close proximity to this location site approximately 3600' West of the proposed location site.

There are no visible archaeological, historical, or cultural sites within any reasonable proximity of the proposed location site. (See Topographic Map "B").

PAGE PETROLEUM INC.
1-14-B1E
Section 14, T2S, R1E, U.S.B. & M.

12. LESSEE'S OR OPERATOR'S REPRESENTATIVE

Ken Allen
PAGE PETROLEUM INC.
P.O. Box 1656
Roosevelt, UT 84066

Tele: 1-801-722-5081

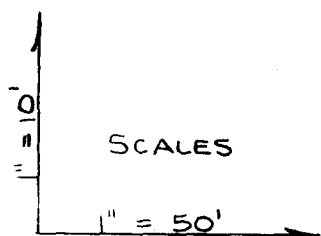
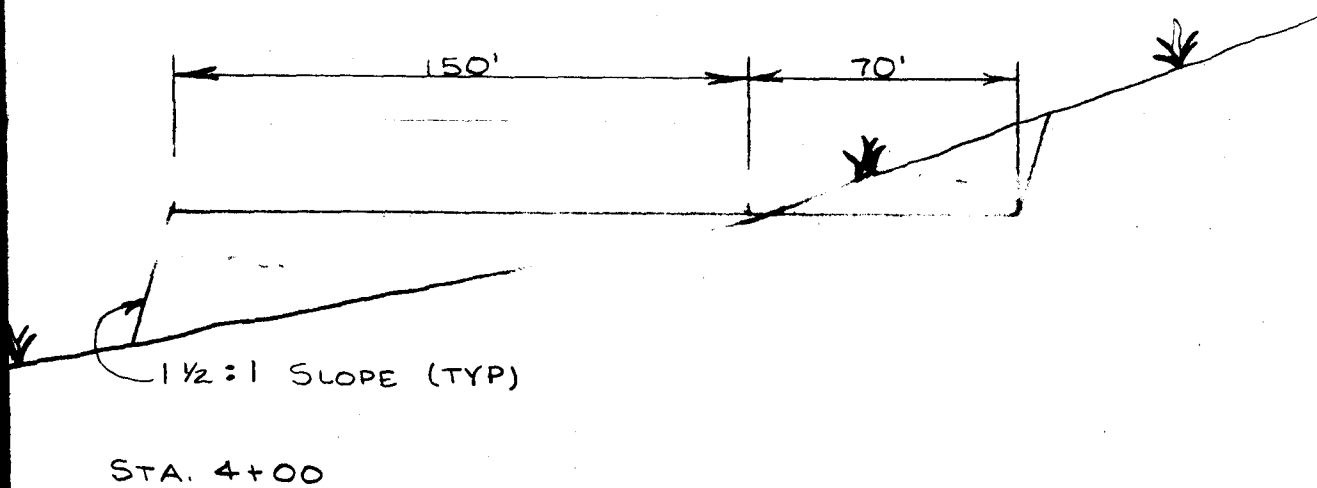
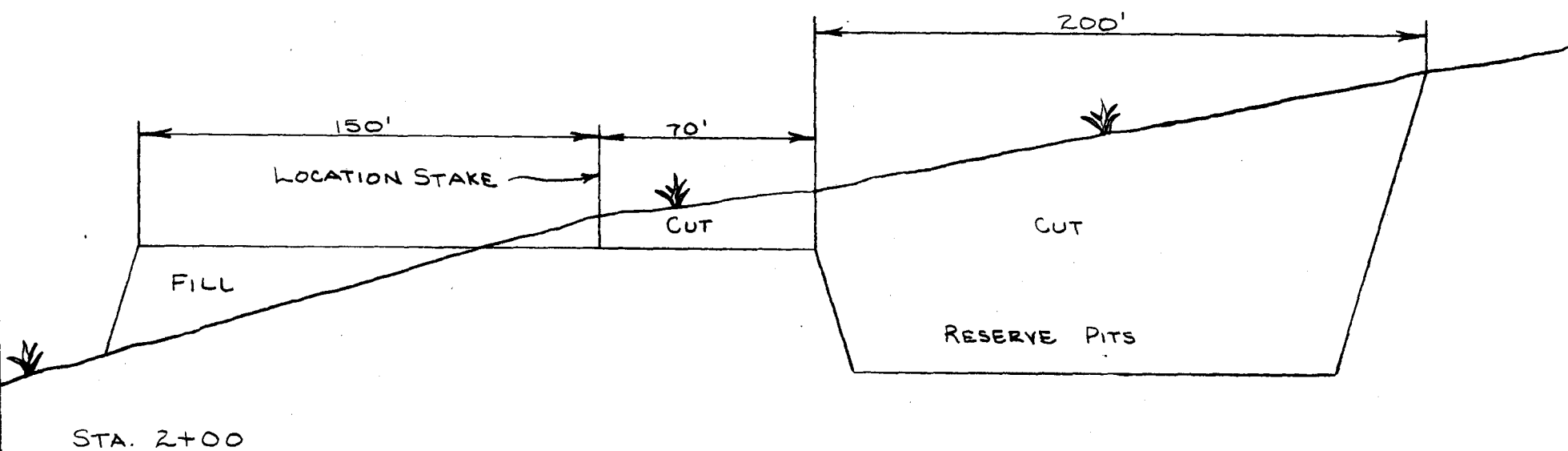
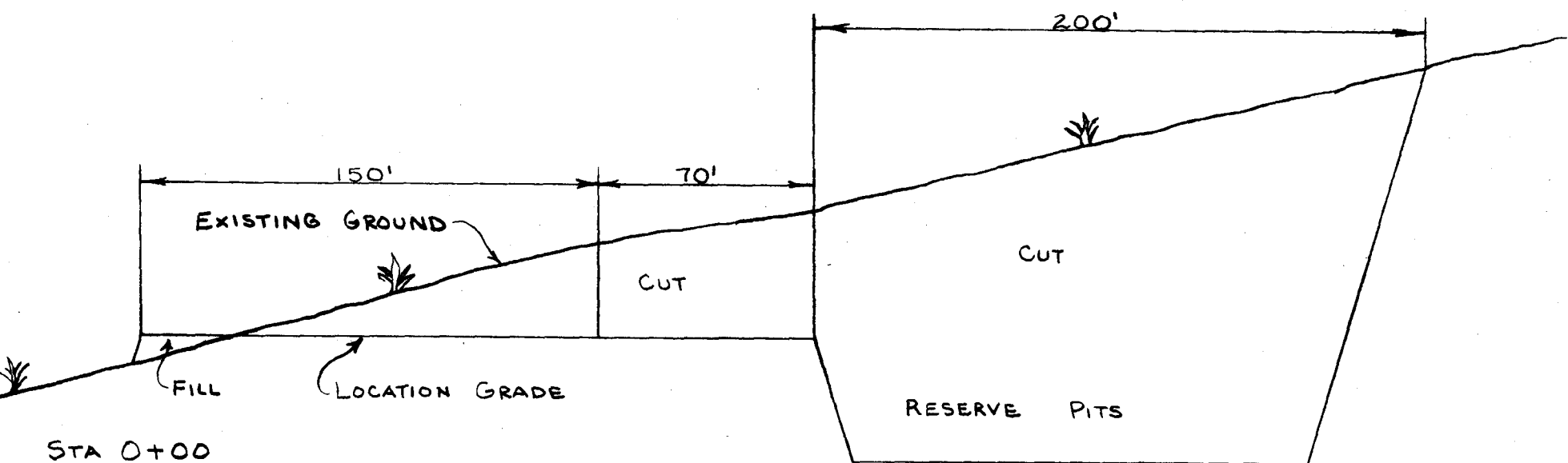
13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site and access route; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with the operation proposed herein will be performed by Page Petroleum Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Date

Ken Allen

PAGE PETROLEUM LTD.
 #1-14 B1E
 LOCATION LAYOUT & CUT SHEET



APPROX. YARDAGES

CUT - 29006 CU. YD.

FILL 4932 CU. YD.

NOTE: THESE YARDAGES
 INCLUDE RESERVE PITS.

③ F-19

C-6⁰

④ C-8³

① F-6³

INLET

WATER

WATER

WATER

WATER

WATER

WATER

C-2⁰

F-6⁴

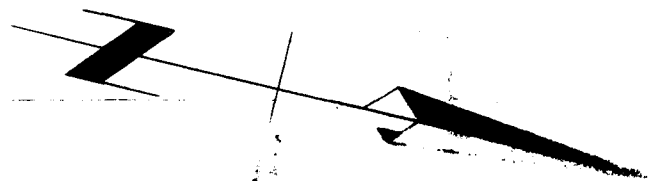
C-3⁹

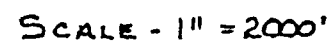
② F-6³

F-0⁴

C-4¹

CROSS SECTIONS

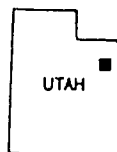




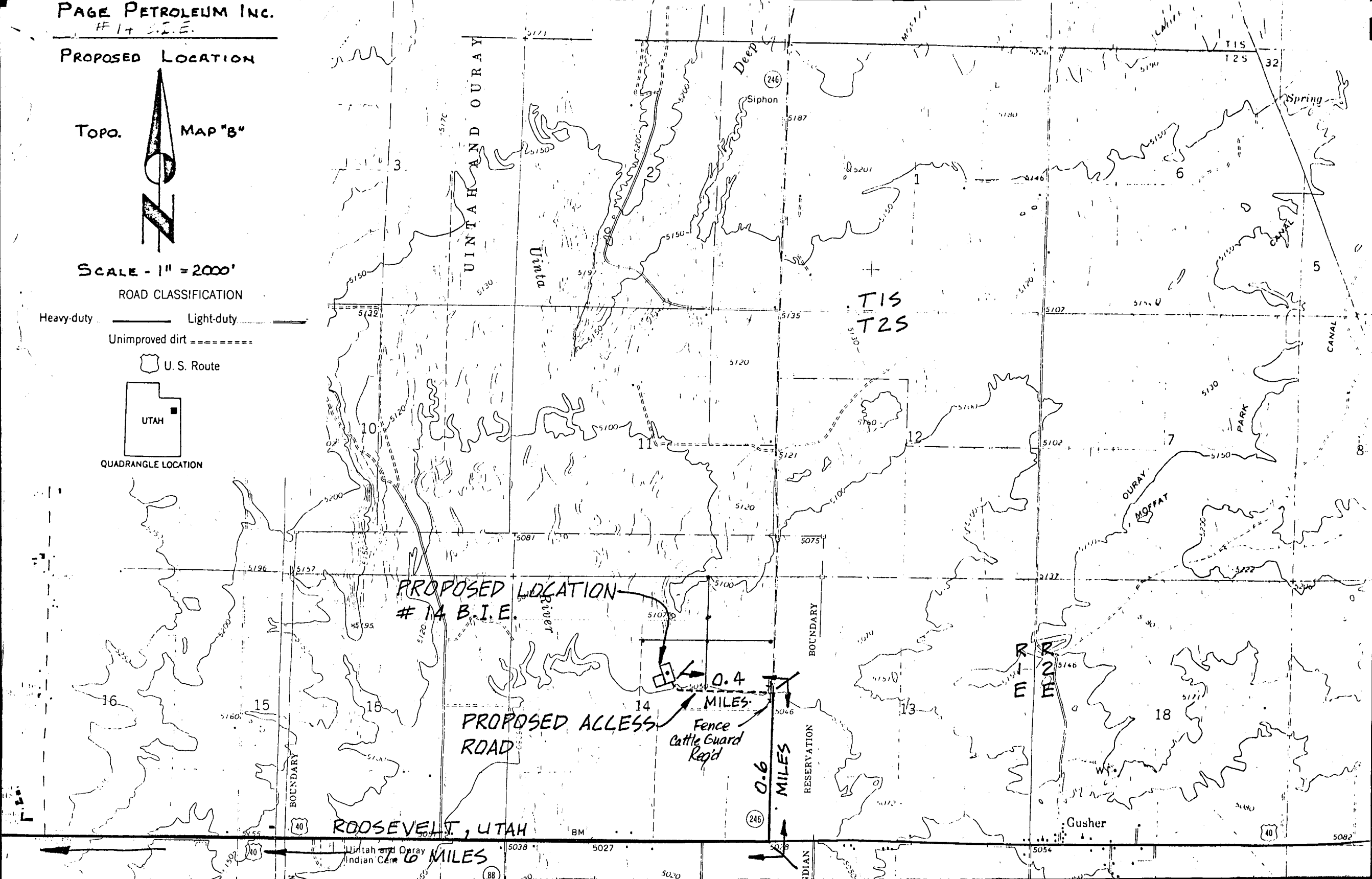
ROAD CLASSIFICATION

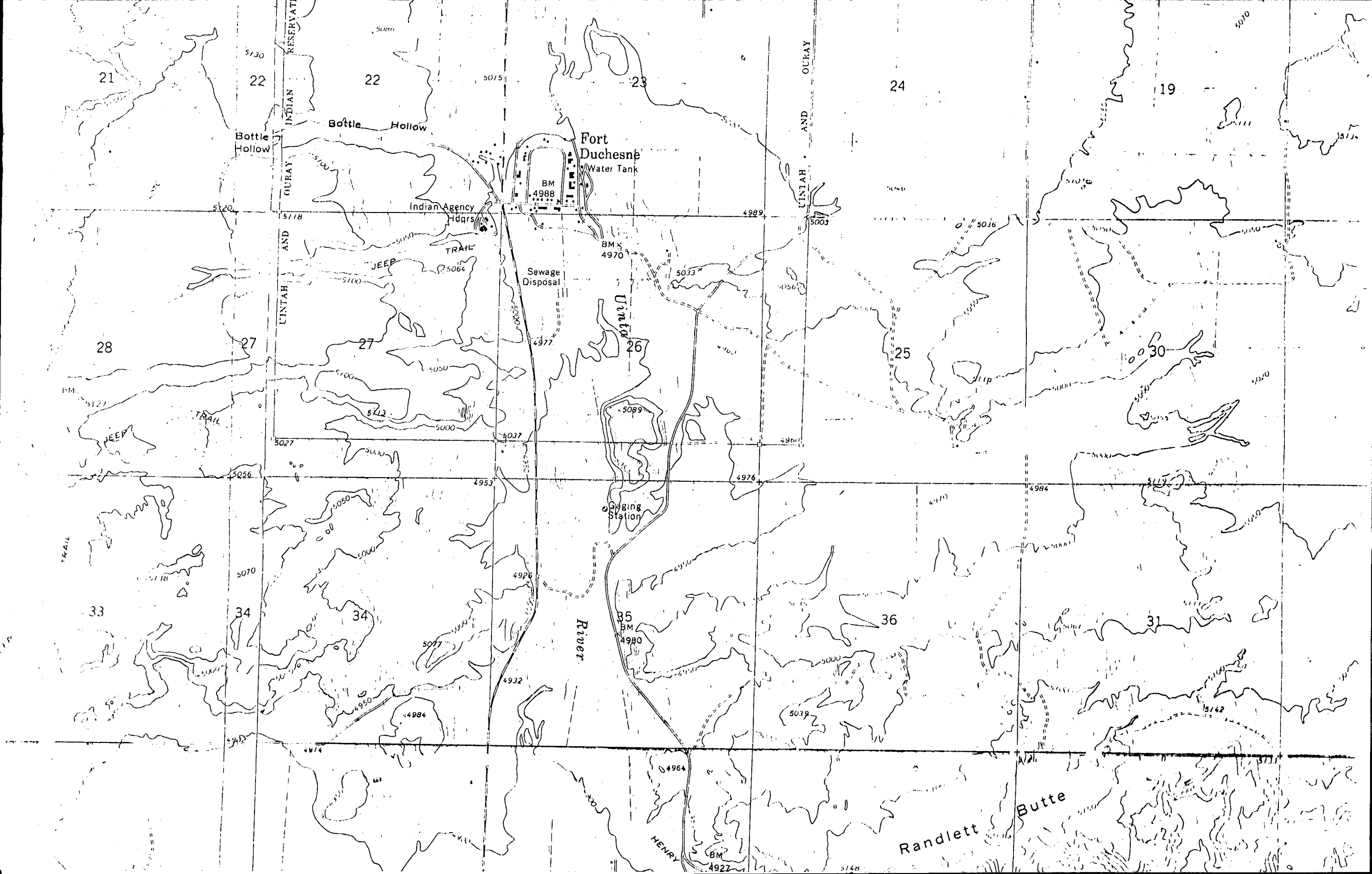
Heavy-duty _____ Light-duty _____

Unimproved dirt =====

 U. S. Route

QUADRANGLE LOCATION





**** FILE NOTATIONS ****

DATE: Sept 5, 1980
OPERATOR: Page Petroleum Inc.
WELL NO: 1-14B1E - 6te Inbae
Location: Sec. 14 T. 2S R. 1E County: Clinton

File Prepared: ☒
Card Indexed: ☒

Entered on N.I.D: ☒
Completion Sheet: ☒

API Number 43-047-30774

CHECKED BY:

Petroleum Engineer: _____

Director: OK as per order issued in Canal 131-24
dtd Jan 14, 1977 - Topographic Exception provided
copy of N.I.D. filed in lieu of Study Notes - 10/7

Administrative Aide: _____

APPROVAL LETTER:

Bond Required: ☐ Survey Plat Required: ☐

Order No. 131-24 1/16/77 O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site

Lease Designation Ind.

Plotted on Map ☒

Approval Letter Written ☒ Wtm

Hot Line ☒

P.I. ☒

#3
Unusual
proper must file
add form
ope me

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒GAS
WELL ☐

OTHER

SINGLE
ZONE ☐MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Page Petroleum Inc.

3. ADDRESS OF OPERATOR

P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

At surface

735' FNL 1522' FEL Section 14, T2S, R1E, U.S.B. & M.

At proposed prod. zone

same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximatley 3 miles + from Fort Duchence, Utah 1 1/2 Air miles

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

735'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

16. NO. OF ACRES IN LEASE

640

19. PROPOSED DEPTH

12700

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5068'

22. APPROX. DATE WORK WILL START*

See 10 pt. plan

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
See 10 point Drilling Compliance Program				

Attachments:

Exhibit "A" - (10 point Compliance Program)

Exhibit "B" - BOP and Auxiliary Equipment

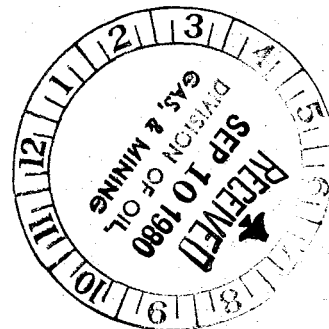
Certified Survey Plat

13 Point Surface Use Plan and attachments

Rig Layout

Topo Map "A"

Topo Map "B"



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

Kenneth Allen

TITLE District Manager

DATE Sept. 8, 1980

(This space for Federal or State office use)

PERMIT NO.

43-047-30774

APPROVAL DATE

9/5/80

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DUPLICATE

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒GAS
WELL ☐

OTHER

SINGLE
ZONE ☐MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Page Petroleum Inc.

3. ADDRESS OF OPERATOR

P.O. Box 1656 Roosevelt, UT 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)

At surface

~~1951' FNL 2196'~~ FEL Section 14, T2S, R1E, U.S.B. & M.

At proposed prod. zone

same 1522' FEL & 735' FNL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approx. 3 miles + from Fort Duchesne, Utah 1½ Air miles

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT. 1951'
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

19. PROPOSED DEPTH

12700

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

~~5051~~ 5068' Ungraded GR

22. APPROX. DATE WORK WILL START*

See 10 Pt. plan

23.

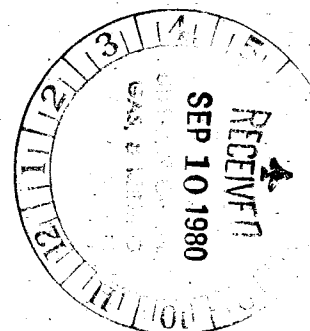
PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
See 10	Point Drilling	Compliance Program		

Attachments:

Exhibit "A" - (10 Point Compliance Program)
Exhibit "B" - BOP and Auxiliary Equipment
Certified Survey Plat
13 Point Surface Use Plan and attachments

Rig Layout
Topo Map "A"
Topo Map "B"



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Kenneth Allen TITLE District Manager DATE July 2, 1980

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY W. J. Martin FOR E. W. GUYNN DISTRICT ENGINEER DATE SEP 09 1980

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NOTICE OF APPROVAL

Utah Oil & Gas

CONDITIONS OF APPROVAL ATTACHED
TO OPERATOR'S COPYFLARING OR VENTING OF
GAS IS SUBJECT TO NTL 4-A
DATED 1/1/80

NEGATIVE DECLARATION

APPROVAL BY SECRETARY OF THE INTERIOR OF Application to drill an
oil well ~~XX~~,
TO Page Petroleum Inc., ~~XXXXXXXXXX~~ COVERING THE FOLLOWING
DESCRIBED TRUST INDIAN LANDS IN Uintah COUNTY, STATE OF UTAH.

LEGAL DESCRIPTION:

NW¹/₄NE¹/₄, Section 14, T2S., R1E., U.S.B. & M.

Located approximately 2 miles north east of Fort Duchesne.

OWNERSHIP

☒ Surface Ute Indian

☒ Sub-Surface Ute Indian

IT HAS BEEN DETERMINED AFTER REVIEW OF THE ACCOMPANYING ENVIRONMENTAL ANALYSIS,
THAT THE APPROVAL OF THIS application IS NOT SUCH A MAJOR FEDERAL ACTION
SIGNIFICANTLY AFFECTING THE QUALITY OF THE HUMAN ENVIRONMENT AS TO REQUIRE THE
PREPARATION OF AN ENVIRONMENTAL IMPACT STATEMENT UNDER SECTION 102 (2) (c) OF
THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (42 U.S.C. § 4332 (2) (c)).

8 August 1980
DATE

L.W. Collins
SUPERINTENDENT

FY: '80-74

LEASE NO. 14-20-H62-2931
WELL NO. 1-14B1E

UINTAH AND OURAY AGENCY
ENVIRONMENTAL IMPACT ANALYSIS

1. PROPOSED ACTION: Page Petroleum Inc. proposes to drill an Oil well (1-14BLE) to, a proposed depth of 0 feet; to construct approximately 0 (~~xxxx~~, miles) of new access road; and upgrade approximately 1/2 (~~xxxx~~, miles) of existing access road.
2. LOCATION AND NATURAL SETTING: The proposed wellsite is located approximately 2.0 miles North East of Fort Duchesne, Utah in the NW 1/4 NE 1/4 Sec. 14 T. 2S., R. 1E., U.S.B. & M meridian. This area is used for Rangeland.
The topography is rolling hills.
The vegetation consist of greasewood, sagebrush, Indian rice grass, tumble weed.
Wildlife habitat for: ☒ Deer ☐ Antelope ☐ Elk ☐ Bear ☒ Small Mammals
☒ Birds ☐ Endangered species ☐ Other
3. EFFECTS ON ENVIRONMENT BY PROPOSED ACTION:
 - A. Vegetation will be destroyed and soil will be moved on approximately 2 acres of land.
 - B. Scenic values of the area will be affected.
 - C. Dust from traffic and construction, and exhaust from equipment may affect air quality
4. ALTERNATIVES TO THE PROPOSED ACTION: Other alternatives were considered but this location was selected.
5. ADVERSE EFFECTS THAT CANNOT BE AVOIDED:
None of the adverse affects listed in item #3 above can be avoided in a practical manner.
6. DETERMINATION: This request action (does) (does not) constitute a major Federal action significantly affecting the quality of the human environment as to require the preparation of an environmental impact statement under Section 102 (2)(c) of the National Environmental Policy Act of 1969 (42 U.S.C. s 4332 (2)(c)).

REPRESENTATIVE:

Craig Hansen - USGS

Gene Stewart - Uintah Engineer

Ed Kurip Meiji, Ken Allen, Page Pet. Inc.

COPY TO:

USGS, P.O. BOX 1037, Vernal, Utah 84078

USGS, Dist. Engr., Cons. Div., 8426 Federal Building., Salt Lake City, Utah 84138

Lease #. 14-20-H62-2931

Well #. 1-14BLE

Ralph A. Hansen 8-7-80
BIA Representative Date

Memorandum

To: USGS District Engineer
From: Surface Managing Agency
Subject: Page Petroleum Inc., , well 1-14BLE
in the NW¹/₄NE¹/₄, Sec. 14, T2S., R1E., USB&M

We (concur with or, recommend) approval of the Application for Permit to Drill the subject well.

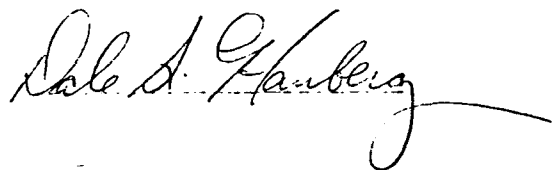
Based on available information on 8-7-80 , we have cleared the proposed location in the following areas of environmental impact:

Yes ☒ No ☐ Listed threatened or endangered species
Yes ☒ No ☐ Critical wildlife habitat
Yes ☒ No ☐ Historical or cultural resources
Yes ☒ No ☐ Air quality aspects (to be used only if project is in or adjacent to a Class I area of attainment)
Yes ☒ No ☐ Other (if necessary)

Remarks: A family of otter are reported to live in the river and ditches near this location. Moving the site to the present location is not expected to have adverse affects.

The necessary surface protection and rehabilitation requirements are enclosed.

Enclosure



Memorandum

Cody

To: District Oil and Gas Engineer, Mr. Edward Guynn

From: Mining, Supervisor, Mr. Jackson W. Moffitt

Subject: Application for Permit to Drill (form 9-331c) Federal oil and gas lease No. 14-20-H62-2931 Well No. 1-14-B1E

1. The location appears potentially valuable for:

☐ strip mining*

☒ underground mining** *oil shale*

☐ has no known potential.

2. The proposed area is

☐ under a Federal lease for _____ under the jurisdiction of this office.

☒ not under a Federal lease under the jurisdiction of this office.

☒ Please request the operator to furnish resistivity, density, Gamma-Ray, or other appropriate electric logs covering all formations containing potentially valuable minerals subject to the Mineral Leasing Act of 1920.

*If location has strip mining potential:

Surface casing should be set to at least 50 feet below the lowest strip minable zone at _____ and cemented to surface. Upon abandonment, a 300-foot cement plug should be set immediately below the base of the minable zone.

**If location has underground mining potential:

The minable zones should be isolated with cement from a point 100 feet below the formation to 100 feet above the formation. Water-bearing horizons should be cemented in like manner. Except for salines or water-bearing horizons with potential for mixing aquifers, a depth of 4,000 feet has been deemed the lowest limit for cementing.

Signed *Allen J. Vance*

EA #559-80

USUAL ENVIRONMENTAL ASSESSMENT

Operator: Page Petroleum Project or Well Name and No.: 1-14B1E

Location: 735' FNL & 1522' FEL Sec. 14 T. 2S R. 1E

County: Uintah State: Utah Field/Unit: Wildcat

Lease No. 14-20-H62-²⁸⁹⁸~~2931~~ Permit No. N/A

Joint Field Inspection Date: August 5, 1980

Field Inspection Participants, Titles and Organizations:

b1c 8/6/80

Admin Control?
Pg 2 - Loc number
Pad 220 x 400
Pg 200 x 200
 $\frac{7}{8}$ mile 30' upper section Pg 2
 $\frac{7}{8}$ mile 2 1/10 ac
Access to road Pg 6-7
Pg 5 - 100' wide
Pg 1-8

Denver

DISCRIPTION OF PROPOSED ACTION

Proposed Action

1. Location State: Utah
 County: Uintah

 1522' FEL, 735' FNL, NW $\frac{1}{4}$ NE $\frac{1}{4}$
 Section 14, T. 2S, R. 1E, ___ M

2. Surface Ownership Location: Indian
 Access Road: Indian

Status of Reclamation Agreements: Not Applicable.

3. Dates APD Filed: Not on APD
 APD Technically Complete: July 18, 1980
 APD Administratively Complete: 9-9-80

4. Project Time Frame

Starting Date: Upon approval

Duration of drilling activities: 90 days.

A period of 30 to 60 days is normally necessary to complete a well for production if hydrocarbons are discovered. If a dry hole is drilled, recontouring and reseeding would normally occur within one year; revegetation or restoration may take several years. If the well is a producer, an indefinite period of time would occur between completion and rehabilitation.

5. Related actions of other federal or state agencies and Indian tribes:

None known.

6. Nearby pending actions which may affect or be affected by the proposed action:

The location was moved out of an existing irrigation project to the south of the new proposed location.

7. Status of Variance Requests:

None known.

The following elements of the proposed action would/could result in environmental impacts:

1. A drill pad 220' wide x 400' long and a reserve pit 200' x 200' would be constructed. No new access road would be constructed and approximately .2 miles of existing road would be improved to 24' of driving surface from a maintained road. 2.1 acres of disturbed surface would be associated with the project. Maximum disturbed width of access road would be limited to 30'.
2. Drilling: Operations will be completed in an orderly manner.
3. Waste Disposal: A trash cage will be used. All refuse will be removed upon completion of drilling operations.
4. Traffic: A traffic hazard sign will be posted on main road to alert traffic of trucks entering Highway.
5. Water Requirements: Proper permits will be obtained for water from the Uinta River.
6. Completion:
7. Production:
8. Transportaion of Hydrocarbons:

Details of the proposed action are described in the Application for Permit to Drill.

The location was moved out of an existing Ute Tribe Irrigation Project. 1951 FNL 2196 FEL, Sec. 14, T. 2S, R. 1E to 735 FNL, 1522 FEL, Sec. 14, T. 2S, R. 1E. This move will reduce impact to irrigation project and allow and easier access to the new proposed location. A sundry change to the location is ~~attached~~ *approved*.

The access road was changed per the attached map to utilize an existing road to the new location and reduce impacts to Ute Tribe Irrigation Projects.

Environmental Considerations of the Proposed Action:

Regional Setting/Topography: Uintah Basin: Province

The area consists of weathered sandstone and shale and buttes and bluffs of the Uinta Formation. these buttes and bluffs are relatively flat on top with steep weathered sides. The valleys that surround the buttes and bluffs slope gently to rugged dissected dendritic drainage patterns. This type of drainage is usually non-perennial in nature.

PARAMETER

A. Geology:

1. Other Local Mineral Resources to be Protected: Possible oil shale in Green River fm and Uinta fm. Possible small saline pods in Green River fm.

Information Source: Mineral Evaluation Report.

2. Hazards

a. Land Stability. The surface would remain relatively stable until soil became saturated then heaving, sluffing and heavy erosion would take place due to the saturation of the clays and shales at the surface.

Information source: Field Observation.

b. Subsidence: Withdrawal of fluids could cause subsidence, however, the composition of the producing zones will reduce this hazard therefore none is anticipated.

Information Source: "Environmental Geology", E.A. Teller. "Physical Geology", Leet and Judson.

c. Seismicity: The area is considered a minor risk - no preventive measures or plans have been presented by the operator.

Information Source: Geologic Atlas of the Rocky Mountain Region.

d. High Pressure Zones/Blowout Prevention: No high pressures are anticipated above the Wasatch, although slight over pressuring may be expected in the upper Wasatch Formation.

Information Source: APD Mineral Evaluation Report.

B. Soils

1. Soil Character: Is a deep mild to strongly alkaline soils. The surface layers are pale brown and light gray loams, silty clay loams and clays. Sand and gravels are intermixed with clays and silts in fluvial washes.

Information Source: Soils of Utah, Wilson - Field Observation.

2. Erosion/Sedimentation: This would increase due to the disruption of vegetation and loosely compacted "A & B" soil horizons of clay and shale. Clay and shale leave a higher rate of erosion due to their grain size and compaction capabilities. Proper construction practices would reduce this impact.

Information Source: "Fluvial Processes in Geomorphology" by Luna B.

C. Air Quality: The area is in a class II containment. There would be a minor increase in air pollution due to emissions from construction and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads.

Information Source: Utah State Health Department/Air Quality Bureau in Salt Lake City, Utah.

D. Noise Levels: Noise from the drilling operation may temporarily disturb wildlife and people in the area. Noise levels would be moderately high during drilling and completion operations. Upon completion, noise levels would be infrequent and significantly less. If the area is abandoned, noise levels should return to predrilling levels.

Information Source: Field Observation

E. Water Resources

1. Hydrologic Character

a. Surface Waters: The location would drain south to an existing irrigation ditch, then to the Uinta River two miles to the west of the location, proper diversions away from the irrigation system will reduce this impact.

Information Source: Field Observation, APD

b. Ground Waters: Ground water is anticipated in the Birds-eye member of the Green River Formation and other less productive aquifer of the Green River Formation, and Uinta Formations.

Information Source: Mineral Evaluation Report, Field Observations

2. Water Quality

a. Surface Waters: No contamination to surface water is anticipated by this drilling program. Proper construction of location and lining reserve pits where needed would insure safe operations.

Information Source: Field Observation

b. Ground Waters: Some minor pollution of ground water systems would occur with the introduction of drilling fluids (filtrate) into the aquifer. Potential communication, contamination, and commingling of formations via the wellbore would be prevented by an adequate response drilling fluid program. The depths of fresh water formations are tested in the 10-point Subsurface Protection Plan.

Information Source: 10-Point Plan

F. Flora and Fauna

1. Endangered and Threatened Species Determination

Based on the formal comments received from the Bureau of Indian Affairs, Fort Duchesne on 8/7/80, we determine that there would be no effect on endangered and threatened species and/or their critical habitat.

2. Flora: Greasewood, cactus, rabbit brush, four wing salt brush.

Information Source: Field Observation

3. Fauna: Deer, antelope, small rodents, birds and reptiles, foxes, coyotes and domestic livestock exist on or near the location, also a large commercial operation of beehives exist on the location and will have to be relocated.

Information Source: Field Observation

G. Land Uses

1. General: The area is used primarily for oil and gas operations although grazing and recreation takes place throughout the year.

Information Source: APD, Field Observation, SMA Representative.

2. Affected Floodplains and/or Wetlands: N/A

3. Roadless/Wilderness Area: N/A

- H. Aesthetics: Operations do not blend in with natural surroundings and could present a visual impact. Painting any permanent equipment a color to blend with the surrounding environment would lessen visual impacts.

Information Source: Field Observation

- I. Socioeconomics: Drilling and production operations are small in size, but contribute substantial financial income to residents of the surrounding area. Local people are used whenever possible. This allows greater economic development of the area.

Information Source: C.M. Hansen, resident of the Uintah Basin

- J. Cultural Resources Determination: Based on the formal comments received from the Bureau of Indian Affairs, Fort Duchesne on 8/7/80, we determine that there would be no effect on cultural resources subject to BIA and USGS recommended stipulations.

Information Source: SMA Concurrence

- L. Adequacy of Restoration Plans: Meet the minimum requirements of NTL-6. The erodibility of area soils could hamper restoration which should commence immediately after drilling or completion. Restoration to pre-drilling conditions could be difficult. The areas short growing season and limited precipitation govern restoration success.

Information Source: APD, Cody M. Hansen; Environmental Scientist;
Field Observation

Alternatives to the Proposed Action:

1. Disapproving the proposed action or no action - If the proposed action is denied, no action would occur, the existing environment would remain in its present state, the lessee/operator would not realize any return on investments and the public would be denied a potential energy source.
2. Approving the project with the recommended stipulations - Under federal oil and gas leasing provisions, the Geological Survey has a responsibility to approve mineral development if the environmental consequences are not too severe or irreversible. Permanent damage to the surface and subsurface would be prevented as much as possible under USGS and Surface Management Agency supervision. Environmental impacts would be significantly mitigated.

3. Approving the site in the proposed plan by the operator, this would interfere with irrigation systems by the Ute Indian Tribe, therefore, this plan is rejected.

Adverse Environmental Effects:

1. If approved as proposed:

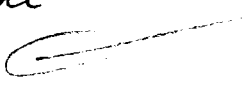
- a. About 2.1 acres of vegetation would be removed, increasing and accelerating erosion potential.
- b. Pollution of groundwater systems ^{could} occur with the introduction of drilling fluids into the aquifer(s). The potential for interaquifer leakage and lost circulation is ever-present, depending on the casing program.
- c. Minor air pollution would be induced on a temporary basis due to exhaust emissions from rig engines and support traffic.
- d. The potential for fires, leaks, spills of gas and oil or water exists.
- e. During construction and drilling phases of the operation, noise and dust levels would increase.
- f. Distractions from aesthetics during the lifetime of the project would exist.
- g. Erosion from the site would eventually be carried as sediment in the Uinta River. The potential for pollution to Uinta River would exist through leaks and spills.
- h. If hydrocarbons would be discovered and produced, further development of the area could be expected to occur, which would result in the extraction of an irreplaceable resource, and further negative environmental impacts. These impacts include the cumulative loss of wildlife habitat due to the areas necessary for roads, pipelines, drillsites, and transmission lines. These actions may disrupt wildlife social behavior and force habitat relocation over an extended period of time. In addition, the cumulative effects of non-point erosion become substantial in a developing field, primarily those located near perennial streams where siltation and sedimentation are critical to aquatic life cycles.

2. Conditional Approval

- a. All adverse impacts described in section one above would occur.

Recommended Approval Conditions:

Drilling should be allowed, provided the following mitigative measures are incorporated into the proposed APD and adhered to by the operator:

- 1. See attached Lease Stipulations. *none*
- 2. See attached BIA Stipulations. 

3. Commercial Beehive and honey operation will be moved and operator of hives will be enumerated for damages.
4. Cattle guard will be placed at paved road entrance to restrict movement of livestock.
5. Location will be rotated 180° to reduce impact to present farm road and irrigation system.
6. No water will be used from existing irrigation canal south of the location.
7. Warning signs on main road to warn of heavy traffic from location.
8. Paint location a buff color to blend in with existing environment.

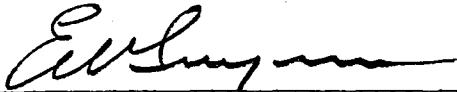
Controversial Issues and Conservation Division Response:

No controversial issues were found by the writer.

We have considered the proposed action in the preceding pages of this EA and find, based on the analysis of environmental considerations provided therein, no evidence to indicate that it will significantly (40 CFR 1508.27) impact the quality of the human environment.

Determination:

I determine that the proposed action (as modified by the recommended approval conditions) does not constitute a major Federal action significantly affecting the quality of the human environment in the sense of NEPA, Section 102(2) (C).



DISTRICT ENGINEER

Signature & Title of Approving Official

AUG 13 1980

Date



PAAC PETEOLUM
1-14 BIE

north

FROM: : DISTRICT GEOLOGIST ME, SALT LAKE CITY, UTAH

TO : DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. 14-20-H62-2931OPERATOR: Page PetroleumWELL NO. 1-14-B1ELOCATION: NE $\frac{1}{2}$ SW $\frac{1}{2}$ NE $\frac{1}{2}$ sec. 14, T. 2S, R. 1E, USMUintah County, Utah

1. Stratigraphy: Operator estimates Wasatch approximately 1200' too deep.
U.S.G.S. estimated tops:

Uintah	surface
Green River	6000'
Wasatch	~9500'
<u>TD</u>	12700'

2. Fresh Water:

Probable in the Uintah

3. Leasable Minerals:

Prospectively valuable for Oil Shale & Gilsonite.
The Oil Shale is deep (~ 6000' to 7500').

4. Additional Logs Needed: Suite is adequate

5. Potential Geologic Hazards: None expected

6. References and Remarks:

Signature: Gregory W. WoodDate: 7-21-80

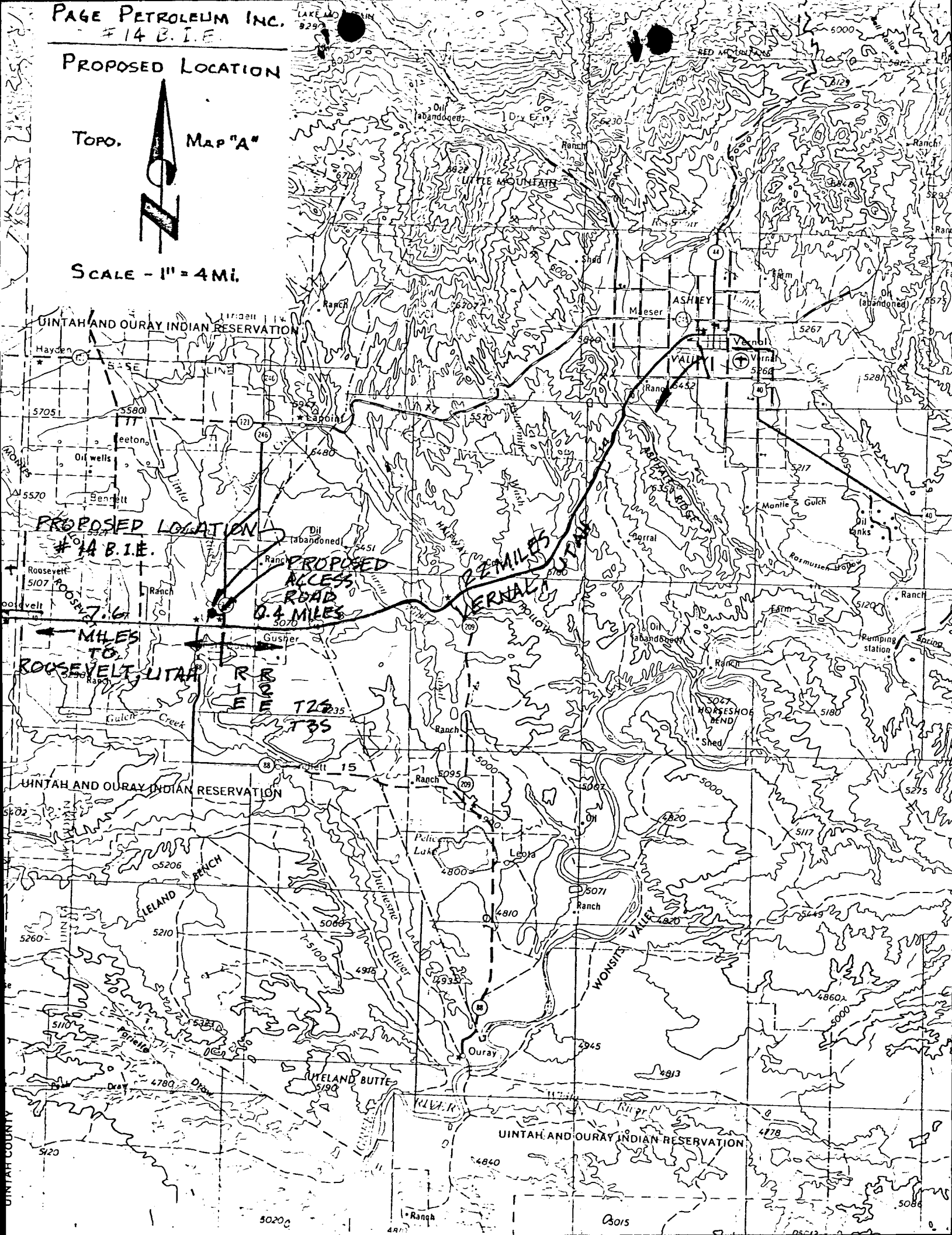
PROPOSED LOCATION

TOPO.

Map "A"



SCALE - 1" = 4 MI.



September 10, 1980

Page Petroleum, Inc.
P.O. Box 1656
Roosevelt, Utah 84066

Re: Well No. Ute Tribal #1-14B1E
Sec. 14, T. 2S, R. 1E.,
Uintah County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with the Order issued in Cause No. 131-24 dated January 16, 1972. However, said approval is conditional upon the filing of an application form in lieu of the improper Sundry notice.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer
Office: 533-5771
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-047-30774.

Sincerely,

DIVISION OF OIL, GAS AND MINING

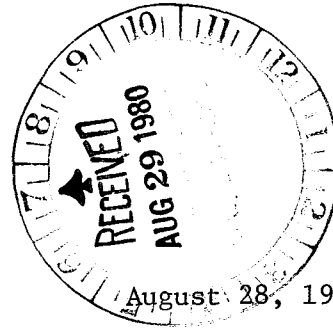
Cleon B. Feight
Director

/btm

cc: DSGS

PAGE

PETROLEUM INC.



State of Utah
Department of Natural Resources
Division of Oil, Gas, & Mining
1588 West North Temple
Salt Lake City, Utah 84116

Attention: Mr. Cleon B. Feight,

RE: Application to drill Page Ute Tribal 1-14-B1E

Dear Sir:

Please find enclosed the amended application to drill the subject well. The location has been changed at the request of the surface owners and is now 585' North of the target area prescribed by the state.

Page Petroleum Inc. has the section to the north under lease and would therefore like to request that the state approve the application to drill in the off target location.

Please advise if you require additional information.

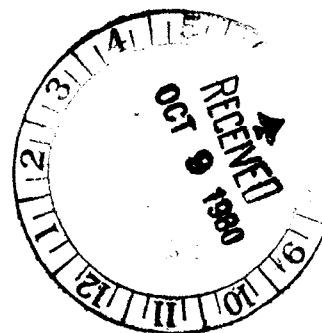
Sincerely Yours,

Ken B. Allen
District Manager

KA/er

PAGE

PETROLEUM INC.



October 8, 1980

State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

RE: Page Exxon Ute Tribal 1-14-B1E
Section 14, T2S, R1E, U.S.M.
Bluebell Field, Uintah County, Utah
API Permit # 43-047-30774
Lease designation and serial # 14-20-H62-2898

The above well was spudded at 1:00 P.M. on October 7, 1980.

A dry hole digger was used to dig a 24" diameter hole and 16" conductor pipe was set at 63' K.B., 50' G.L. and cemented with ready mix by Uintah Basin Concrete.

Verbal notification was given by Page Petroleum Inc., Roosevelt, Utah at 8:25 A.M. to the U.S. Geological Survey in Salt Lake City, Utah on 10-8-80.

Glomac Drilling rig # 1 is drilling this well for Page Petroleum Inc.

Sincerely Yours,

A handwritten signature in cursive script, appearing to read 'K B Allen'.

Ken B. Allen
District Manager

KA/er

JOHNSTON-MACCO

Schlumberger

**technical
report**

FIELD REPORT #25380 D

COMPANY PAGE PETROLEUM, INC. WELL PAGE-EXXON-UTE TEST NO. 1 COUNTY UNITAH STATE UTAH
#1-14 B1E

----- WELL IDENTIFICATION -----

COMPANY:	PAGE PETROLEUM, INC.	CUSTOMER:	SAME
	P.O. BOX 1656		
	ROOSEVELT, UTAH 84066		
WELL:	PAGE-EXXON-UTE #1-14-B1E	LOCATION:	SEC.14, T2S R1E
TEST INTERVAL:	4992' TO 5045'	FIELD:	WILD CAT
TEST NO:	1	TEST DATE:	10-27-80
COUNTY:	UINTAH	STATE:	UTAH
TECHNICIAN:	RICHARDS (VERNAL)	TEST APPROVED BY:	MR. C.R. WHITE

----- EQUIPMENT AND HOLE DATA -----

TEST TYPE:	M.F.E. OPEN HOLE	DRILL PIPE LENGTH:	4380	FT.
ELEVATION:	5050	DRILL PIPE I.D.:	3.80	IN.
TOTAL DEPTH:	5045	DRILL COLLAR LENGTH:	565	FT.
MAIN HOLE/CASING SIZE:	9 5/8	DRILL COLLAR I.D.:	2.25	IN.
RAT HOLE/LINER SIZE:	-	PACKER DEPTHS:	4988 & 4992	FT.
FORMATION TESTED:	UINTAH		&	FT.
NET PROD. INTERVAL:	11	FT. DEPTHS REF. TO:	KELLY BUSHING	FT.
POROSITY:	6	%		

----- TEST TOOL CHAMBER DATA -----

SAMPLER PRESSURE:	20	PSIG
RECOVERED OIL GRAVITY:	API @	DEG. F.
RECOVERY GOR:		FT3/BBL.
SAMPLE CHAMBER CONTENTS		
FLUID	VOLUME	MEAS. CHLOR.
		RESIST. TEMP. (PPM)
		(OHM-M) (DEG F.)
GAS:	- FT.3	
OIL:	- CC	
WATER:	2400 CC	.5 52 10000
MUD:	- CC	
FILTRATE:		
TOTAL LIQUID:	2400 CC	

----- MUD DATA -----

TYPE:	LOW SOLIDS SEMI DISPER
WEIGHT:	9.2 LB/GAL.
VISCOSITY:	45 SEC.
WATER LOSS:	13.6 CC
FLUID	RESIST TEMP CHLOR
	(OHM-M) (DEG F) (PPM)
MUD:	4 46
FILTRATE:	3.6 46 1000

----- REMARKS -----

NO. OF REPORTS REQUESTED: 10 (5X'S)

FIELD REPORT NO. 253800

----- SURFACE INFORMATION -----

DESCRIPTION(RATE OF FLOW)	TIME	PRESSURE PSIG	SURFACE CHOKE
SET PACKER	1430	-	1/4"
OPENED TOOL	1442	-	"
BLOW, 1/4" IN WATER			
	1444	2 OZ	"
CLOSED FOR INITIAL SHUT-IN	1453	5.75 OZ	"
FINISHED SHUT-IN	1523	-	"
RE-OPENED TOOL	1524	-	"
BLOW, 1/4" IN WATER			
	1533	4 OZ	"
	1544	7 OZ	"
	1554	8.5 OZ	"
	1604	8 OZ	"
	1614	7.75 OZ	"
CLOSED FOR FINAL SHUT-IN	1624	6.5 OZ	"
FINISHED SHUT-IN	1724	-	"
PULLED PACKER LOOSE	1727	-	-

CUSHION TYPE: -	- FT	- PSIG	11/16 IN. BOTTOM CHOKE
-----------------	------	--------	------------------------

----- RECOVERY INFORMATION -----

RECOVERY	FEET	BARRELS	%OIL	%WATER	%OTHERS	API GRAV.	DEG.	RESIST	DEG.	CHL PPM
WATER CUT MUD	45	.64						1.2	45	2400
GAS CUT WATER	755	5.47								
TOP SAMPLE								.38	48	11000
BOTTOM SAMPLE								.5	50	10000

FIELD REPORT NO. 25380D

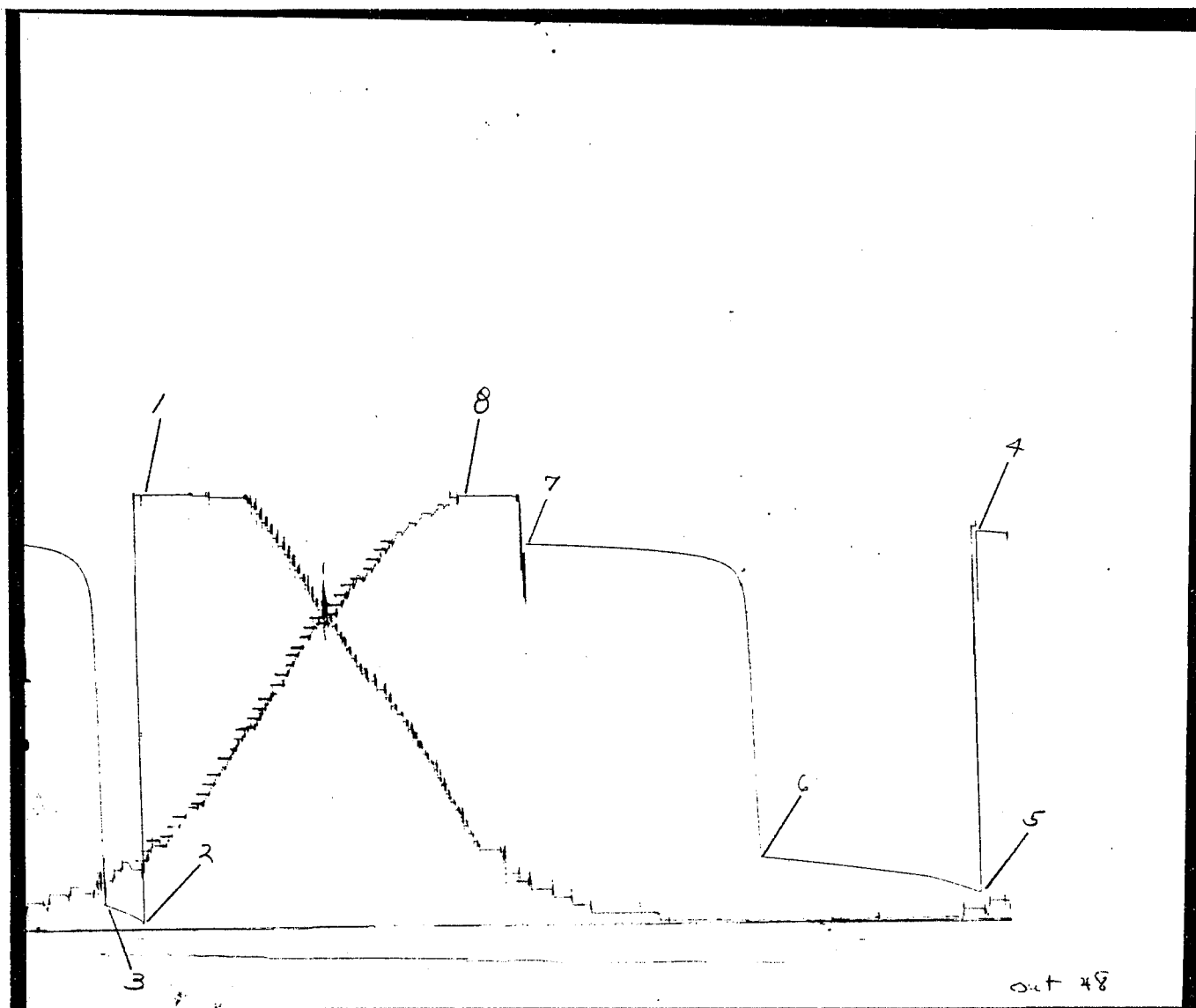
FIELD REPORT NO.: 25380 D

CAPACITY: 4,700#

JOHNSTON
Schlumberger

INSTRUMENT NO.: J-1238

NUMBER OF REPORTS: 10-



PRESSURE LOG

FIELD REPORT NO. 25380D

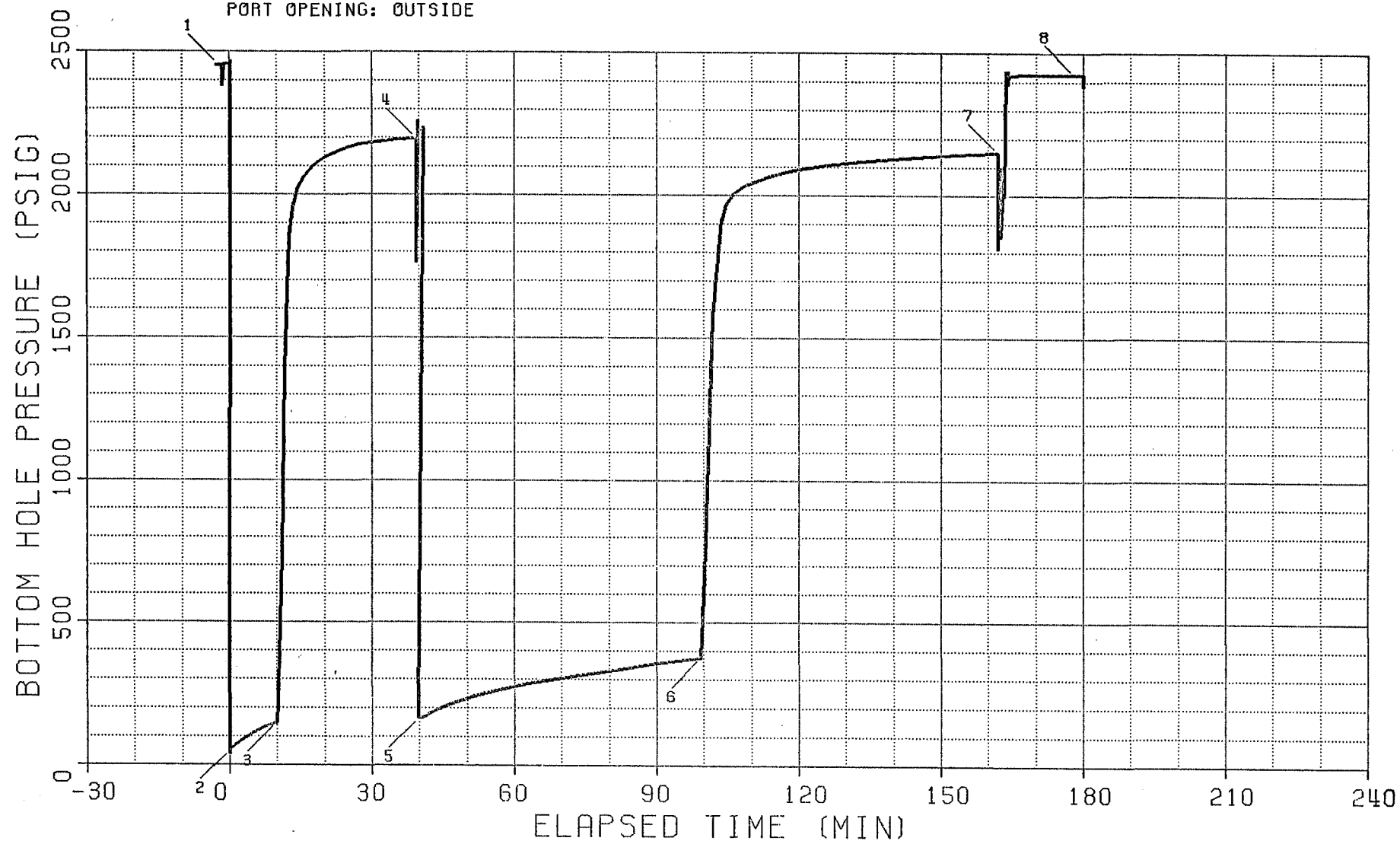
INSTRUMENT:

NUMBER: J-1238

CAPACITY: 4700 PSI

DEPTH: 4998 FT

PORT OPENING: OUTSIDE



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-1238
PORT OPENING: OUTSIDE

CAPACITY (PSI): 4700
BOTTOM HOLE TEMP (F): 114

DEPTH (FT): 4998
PAGE 1

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	2454	-2.3
START FLOW	2	52	0.0
END FLOW & START SHUT-IN	3	148	9.9
END SHUT-IN	4	2198	39.4
START FLOW	5	165	39.8
END FLOW & START SHUT-IN	6	375	99.3
END SHUT-IN	7	2151	161.9
HYDROSTATIC MUD	8	2425	178.0

***** * SUMMARY OF FLOW PERIODS * *****

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	9.9	9.9	52	148
2	39.8	99.3	59.5	165	375

***** * SUMMARY OF SHUT-IN PERIODS * *****

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	9.9	39.4	29.4	148	2198	148	9.9
2	99.3	161.9	62.6	375	2151	375	69.4

FIELD REPORT NO. 253800
INSTRUMENT NO. J-1238

TEST PHASE : FLOW PERIOD # 1

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
0.0	0.0	52
5.0	5.0	112
9.9	9.9	148

TEST PHASE : SHUT-IN PERIOD # 1

1. FINAL FLOW PRESSURE ["P "] = 148 PSIG
WF
2. PRODUCING TIME ["T "] = 9.9 MIN
P

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P "] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P - P] WS WF
9.9	0.0	148		0
10.9	1.0	699	1.038	550
11.9	2.0	1852	0.775	1404
12.9	3.0	1899	0.634	1751
13.9	4.0	1986	0.542	1838
14.9	5.0	2036	0.475	1888
15.9	6.0	2065	0.424	1917
16.9	7.0	2085	0.383	1937
17.9	8.0	2104	0.350	1956
18.9	9.0	2116	0.323	1968
19.9	10.0	2128	0.299	1980
21.9	12.0	2144	0.262	1996
23.9	14.0	2158	0.233	2010
25.9	16.0	2168	0.210	2020
27.9	18.0	2176	0.191	2028
29.9	20.0	2181	0.175	2033
31.9	22.0	2186	0.162	2038
33.9	24.0	2191	0.150	2042
35.9	26.0	2194	0.140	2046
37.9	28.0	2196	0.132	2048
39.4	29.4	2198	0.126	2050

FIELD REPORT NO. 253800
INSTRUMENT NO. J-1238

TEST PHASE : FLOW PERIOD # 2

ELAPSED TIME (MIN) *****	DELTA TIME (MIN) *****	FLOWING PRESSURE (PSIG) *****
39.8	0.0	165
44.8	5.0	198
49.8	10.0	231
54.8	15.0	254
59.8	20.0	273
64.8	25.0	289
69.8	30.0	302
74.8	35.0	315
79.8	40.0	329
84.8	45.0	342
89.8	50.0	355
94.8	55.0	366
99.3	59.5	375

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P "] = 375 PSIG
WF
2. PRODUCING TIME ["T "] = 69.4 MIN
P

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P "] (PSIG) *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE [P - P "] WS WF *****
99.3	0.0	375		0
100.3	1.0	788	1.848	413
101.3	2.0	1307	1.553	932
102.3	3.0	1665	1.383	1290
103.3	4.0	1844	1.264	1469
104.3	5.0	1943	1.173	1567
105.3	6.0	1981	1.099	1605
106.3	7.0	2004	1.038	1628
107.3	8.0	2017	0.986	1641
108.3	9.0	2029	0.940	1653
109.3	10.0	2038	0.900	1663
111.3	12.0	2051	0.832	1675
113.3	14.0	2063	0.775	1688
115.3	16.0	2073	0.727	1698
117.3	18.0	2082	0.686	1706
119.3	20.0	2090	0.650	1714
121.3	22.0	2095	0.619	1720
123.3	24.0	2100	0.590	1725
125.3	26.0	2106	0.565	1730
127.3	28.0	2110	0.542	1734
129.3	30.0	2113	0.520	1738

FIELD REPORT NO. 25380D
INSTRUMENT NO. J-1238

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P "] = 375 PSIG
2. PRODUCING TIME ["T "] = 69.4 MIN
P_{WF}

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P "] (PSIG) WS *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE [P - P] WS WF *****
134.3	35.0	2121	0.475	1746
139.3	40.0	2127	0.437	1752
144.3	45.0	2133	0.405	1758
149.3	50.0	2139	0.378	1764
154.3	55.0	2144	0.355	1769
159.3	60.0	2149	0.334	1773
161.9	62.6	2151	0.324	1776

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT TRIPLICATE*
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTED OR TRIBE NAME Ute
3. ADDRESS OF OPERATOR P.O. Box 1656 Roosevelt, Utah 84066		7. UNIT AGREEMENT NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1522' FEL - 735' FNL, Sec 14, T2S, R1E, U.S.M.		8. FARM OR LEASE NAME
14. PERMIT NO. API 43-047-30774		9. WELL NO. 1-14-B1E
15. ELEVATIONS (Show whether DV, RT, GR, etc.) 5068' GR		10. FIELD AND POOL, OR WILDCAT Bluebell
		11. SEC., T., R., M., OR B.E. AND SURVEY OR AREA Sec 14, T2S, R1E U.S.M.
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) Drilling new well ☒PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

10-7-80: Well spudded at 1:00 P.M. 16" Conductor pipe set at 63' KB, 50' G.L.

10-12-80: Ran 42 joints 10 3/4", 40.5#, K-55, ST&C surface casing. 1655' overall with float equipment. Cemented by Hallco with 1125 sacks of Hallco light, 3% CC, 1/4# floccle per sack, tailed with 300 sacks of "H" with 2% CC, 1/4# floccle per sack. Good returns. Plug down at 1:35 P.M.

10-14-80: Pressure tested B.O.P., Kill Line, choke line, and manifold to 5000#, Hydril to 1500#. Upper Kelly Cock would not hold. U.S.G.S. agreed to drill out and change out Kelly Cock. Pressure tested casing to 1100# prior to drilling float collar and after.

10-15-80: Rig down Air Drilling equipment and change to mud.

10-28-80: Run DST #1.

18. I hereby certify that the foregoing is true and correct

SIGNED R B Allen TITLE District Manager

DATE 11-17-80

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____ DATE _____

*See Instructions on Reverse Side

DRILL STEM TEST REPORT FORM

WELL NAME Page Exxon 1-14 B1E

Test Number 1

Hole Size 9 7/8

Date Oct. 27, 1980

Drill Pipe (Size & Lgth) 4 1/2 16.60 44.34

Test Interval 4992 - 5045

Drill Collars (Size & Lgth) 7 3/4 X 2 7/8 52.3

Total Depth 5045

Type of cushion fluid NONE

Amount of cushion _____

TEST DATA:

1. Tool open at 1442 hours.
2. Initial open period 10 mins.
3. Initial shut-in period 30 mins.
4. Final flow period 60 mins.
5. Final shut-in period 60 mins.
6. Description of blow on initial open period Opened w/ weak blow increased to 5 3/4 oz. on 1/4" choke
7. Description of blow during test Opened w/ weak blow increasing from 1/2 oz. in 2 min. to 8 1/4 oz. in 30 min. decreasing to 6 1/2 oz. in 60 min.
8. C.T.S. NONE mins; O.T.S. NONE mins; Bottom hole choke size 1 1/16
9. Flow Rate: Gas _____ C.F.P.D. Oil _____ B.P.H. G.O.R. _____
10. Gravity of Gas _____ Gravity of Oil _____
11. Total fluid recovery: 45' mud cut H₂O 75.5' very slightly
925 cut H₂O
12. Resistivity of H₂O 2.5 @ 52° Chlorides of H₂O 10,000 P.P.M. - Sample
13. Depth of top press bomb 4961 Bottom Bomb 4998

PRESSURE DATE:

Top Bomb:
 I.H.P. 2455
 I.S.I.P. 2191
 I.F.P. 42 - 146
 F.F.P. 146 - 363
 F.S.I.P. 2154
 F.H.H. 2427
 Temp 114°

Bottom Bomb:
 I.H.P. 2461
 I.S.I.P. 2187
 I.F.P. 54 - 158
 F.F.P. 168 - 326
 F.S.I.P. 2168
 F.H.H. 2451
 Temp 114°

SAMPLE CHAMBER DATA

1. Gas _____ C.F.
2. Oil _____ C.C.
3. H₂O 2400 C.C. w/ 120# pres.
4. Mud _____ C.C.
5. B.O.R. _____ B.S. & W _____ %

REMARKS: Resis. of mud, 4 at 46 degree, CHL 1,000

REMARKS:

Resis. of mud 4 at 46 degree

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931	
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute	
3. ADDRESS OF OPERATOR P.O. Box 1656 Roosevelt, Utah 84066		7. UNIT AGREEMENT NAME Unit	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1522' FEL, 735' FNL, Sec 14, T2S, R1E, USM		8. FARM OR LEASE NAME	
14. PERMIT NO. API 43-047-30774		9. WELL NO. 1-14-B1E	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5068' GR		10. FIELD AND POOL, OR WILDCAT Bluebell	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 14, T2S, R1E, USM	
		12. COUNTY OR PARISH Utah	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input checked="" type="checkbox"/> Drilling new well	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1-1-81: Drilling cement at 9,000'

1-3-81: Release rig at 6:00 A.M. Plug Back TD. 11,794'

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature]

TITLE District Manager

DATE 1-7-81

(This space for Federal or State office use)

APPROVED BY _____

TITLE _____

DATE _____

CONDITIONS OF APPROVAL, IF ANY:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT-1" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931	
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute	
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14. PERMIT NO. API 43-047-30774		9. WELL NO. 1-14-B1E	
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5068 GR		10. FIELD AND POOL, OR WILDCAT Bluebell	
		11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA Sec 14, T2S, R1E, USM	
		12. COUNTY OR PARISH Uintah	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐

Drilling new well

REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐

X

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

11-30-80: Ran Dual Induction, SFL, SP Compensated Neutron, Formation Density,
Gamma Ray Logs. 24 Side wall cores, Rec. 19.
Depth 9,910'

18. I hereby certify that the foregoing is true and correct

SIGNED

R. B. Allen

TITLE District Manager

DATE 1-8-81

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

SUBMIT IN DUPLICATE*

STATE OF UTAH
OIL & GAS CONSERVATION COMMISSION

(See other instructions on reverse side)

2

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____
 b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____

2. NAME OF OPERATOR

Page Petroleum Inc.

3. ADDRESS OF OPERATOR

P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 1522' FEL, 735' FNL, section 14, T2S, R1E USM

At top prod. interval reported below same

At total depth same

14. PERMIT NO. DATE ISSUED
API 43-047-30774 09-05-80

15. DATE SPUDDED 10-07-80 16. DATE T.D. REACHED 12-27-80 17. DATE COMPL. (Ready to prod.) 01-26-81 18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 5068' GR 19. ELEV. CASINGHEAD 5068'
 20. TOTAL DEPTH, MD & TVD 11,843 21. PLUG, BACK T.D., MD & TVD 11,794' 22. IF MULTIPLE COMPL., HOW MANY* N/A 23. INTERVALS DRILLED BY → X 24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
 top interval 9,951', bottom interval 11,788' both Wasatch
 25. WAS DIRECTIONAL SURVEY MADE no

26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction, SFL, SP Compensated Neutron, Formation Density, Gamma Ray, Bond log, Dual Induction, CNL with Gamma Ray Correlation log. yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10 3/4"	40.5#	1653' KB	14 3/4"	1125 sacks Halco light 3% CC	
				300 sacks class "H" 2% CC	
7 5/8"	26.4#&29.7#	9910' KB	9 7/8"	630 sacks Halco light, 10# gilsonite	
				200 sacks class "H" 2% HR-8	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD
5"	9,705'	11,794'	1115 sxs H		SIZE DEPTH SET (MD) PACKER SET (MD)
			8% Halaid 9		2 7/8" 9,850' 9,850'
					2 3/8" 4995.36'

31. PERFORATION RECORD (Interval, size and number)

11,179' to 11,670'-76'-304 shots, 3 3/8" casing gun.
 11,182' to 11,188' and 11,176' to 11,179'-9' and 36 shots, 2" thru tubing gun.
 9951' to 11,778'-45'-180 shots/ 2" tubing gun

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,176' to 11,788'	see attached sheet
11,176' to 11,788'	" "
11,176' to 11,788'	" "

33.* PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
1-26-81		flowing				producing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1-17-81	20	18/64	→	110	10 MCF	0	.29
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
367 average	2500 wellhead	→	132	10 MCF	0	unknown	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

sold

TEST WITNESSED BY

Dave Roth

35. LIST OF ATTACHMENTS

acidizing detail, drill stem test report

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Ellen Rasmussen

TITLE Office Manager

DATE 6/9/81

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES			38. GEOLOGIC MARKERS				
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP	TRUE VERT. DEPTH
Uinta	4992	5045	DST # 1: Type of cushion fluid: none (see attached sheet for detail)				
Green River	8443'	8449'	Core # 1: 6' full recovery				
Green River	8457'	8518'	Core # 2: 61' full recovery				

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPLICATE*
 (On instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
 Use "APPLICATION FOR PERMIT-1" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931	
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3. ADDRESS OF OPERATOR P.O. Box 1656 Roosevelt, Utah		7. UNIT AGREEMENT NAME Unit	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1522' FEL, 735' FNL, Section 14, T2S, R1E, USM		8. FARM OR LEASE NAME Bluebell	
14. PERMIT NO. API 43-047-30774		15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5068' GR	
16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data		9. WELL NO. 1-14-B1E	
17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*		10. FIELD AND POOL, OR WILDCAT Bluebell	
11. SEC. T., R., M., OR BLE. AND SURVEY OR AREA Sec 14, T2S, R1E, USM		12. COUNTY OR PARISH 13. STATE Uintah Utah	

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> SHOOT OR ACIDIZE <input type="checkbox"/> REPAIR WELL <input type="checkbox"/> (Other) <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETE <input type="checkbox"/> ABANDON* <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/> FRACTURE TREATMENT <input type="checkbox"/> SHOOTING OR ACIDIZING <input type="checkbox"/> (Other) <u>Drilling new well</u> <input checked="" type="checkbox"/>	REPAIRING WELL <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> ABANDONMENT* <input type="checkbox"/>
(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			
12-1-80: Ran 90 joints of 7 5/8", 29.7#, N-80, LT&C, 8rd Casing, 3701.34'. 155 joints of 7 5/8", 26.4#, N-80, LT&C, 8rd Casing, 6221.42'. Total casing 9,922.76' with float equipment 9,927.19' overall. Landed at 9,910' KB casing measurement. Cemented by Hallco with 630 sacks Hallco light, 10# gilsonite, 1/4 # flocele per sack, tailed with 200 "H", 2% HR-8, 1/4 # flocele per sack. Good returns.			
12-22-80: Lost returns.			
12-25-80: Lost approximately 3000 total barrels.			
12-26-80: Ran Dual Induction, FDC, CNL with Gamma Ray.			
12-27-80: Ran 55 joints 5" casing, 18#, N-80, FJ & SFJ, Hydrill with centralizer every other joint and hung in 7 5/8" casing with Baker Liner Hanger. Set at 11,840' KB casing measurement. Float collar at 11,794' with liner top at 9,705'. (200' overlap). Total casing 2129.20' with float equipment and hanger 2135.13'. Cemented by Hallco with 1115 sacks class "H" with .8% Halaidd 9, 1/4 # flocele per sack. Good returns. Plug down at 12:30 P.M. Plug back TD 11,794'			
12-31-80: Drilling cement at 8,310'			

18. I hereby certify that the foregoing is true and correct

SIGNED H. B. Allen

TITLE District Manager

DATE 1-7-81

(This space for Federal or State office use)

APPROVED BY _____
 CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

PAGE UTE TRIBAL 1-14-B1E

SUPPLEMENT TO FORM OGCC-3

ACIDIZING DETAIL

- 1-20-81: Acidized with B.J. Hughes. Used 3,000 gallons of 15% HCL acid plus 300# benzoic acid flakes and 400 perf balls. Acid contained iron sequestering agent, corrosion inhibitor, surfactant, demulsifier and 15% toluene.
- 2-3-81: Acidized with Smith Energy with 15,000 gallons, 15% mud acid.
- 3-4-81: Acidized by Halliburton with 15,000 gallons of 7 1/2% HCL mixed with 1500 gallons of zyelene. dropped 200# of flake and 75 balls after 10,000 gallons.

June 23, 1981

Page Petroleum Inc.
P. O. Box 1656
Roosevelt, Utah 84066

Re: See Attached Sheet

Gentlemen:

Our records indicate that you have not filed the monthly drilling reports for the months indicated above on the subject wells.

Rule C-22, General Rules and Regulations and Rules of Practice and Procedure, requires that said reports be filed on or before the sixteenth (16) day of the succeeding month. This report may be filed on Form OGC-1B, (U. S. Geological Survey Form 9-331) "Sundry Notices and Reports on Wells," or on company forms containing substantially the same information. We are enclosing forms for your convenience.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING


Sandy Bates
Clerk-Typist

/lm

Enclosures: Forms

1. Well No. Fee 2-20C5
Sec. 20, T. 3S, R. 5W
Duchesne County, Utah
(December '80-May '81)
2. Well No. Ute Tribal #2-13C6
Sec. 13, T. 3S, R. 6W
Duchesne County, Utah
(February-May '81)
3. Well No. Ute Tribal #2-2C6
Sec. 2, T. 3S, R. 6W
Duchesne County, Utah
(February-May '81)
4. Well No. Utah Tribal #1-14B1E
Sec. 14, T. 2S, R. 1E
Uintah County, Utah
(February-May '81)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIP DATE
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931
2. NAME OF OPERATOR PAGE PETROLEUM INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute
3. ADDRESS OF OPERATOR 1801 Broadway, Suite 1700, P.O. Box 17526, Denver, CO 80217		7. UNIT AGREEMENT NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1522' FEL, 735' FNL		8. FARM OR LEASE NAME
14. PERMIT NO. 43-047-30774		9. WELL NO. 1-14-B1E
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5068' GR		10. FIELD AND POOL, OR WILDCAT Bluebell
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 14-2S-1E
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

PULL OR ALTER CASING

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANS

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

REPAIRING WELL

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

4/29/81 - MI & RU Oilwell Perforators and perforated the following intervals with 2" tbq.
gun and 4 SPF: 9951-55', 10,084-92', 10,211-15', 10,300-303', 10425-430',
11,124-128', 11,222-224', 11,268-271', 11,459-462', 11,532-534', 11,590-594',
11,775-778'.

Wasatch

18. I hereby certify that the foregoing is true and correct

SIGNED

Donald F. Wicher

TITLE Manager of Engineering

DATE 10/13/81

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

CP 10/14/81

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIP DATE
(Other instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931
2. NAME OF OPERATOR PAGE PETROLEUM INC.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute
3. ADDRESS OF OPERATOR 1801 Broadway, Suite 1700, P.O. Box 17526, Denver, CO 80217		7. UNIT AGREEMENT NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1522' FEL, 735' FNL		8. FARM OR LEASE NAME
14. PERMIT NO. 43-047-30774		9. WELL NO. 1-14-B1E
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 5068' GR		10. FIELD AND POOL, OR WILDCAT Bluebell
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 14-2S-1E
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☒(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

6/2/81 - MI & RU Oilwell Perforators and perf'd the following intervals:

- #1: 2" tbg. gun - 10,450-454', 10,674-678', 10,735-741', 10,864-869'
#2: 3-1/8" csg. gun - 9824-27', 9776-78', 9766-72', 9724-29'
#3: 4" csg. gun - 9664-66', 9610-16', 9495-9500', 9476-79', 9450-54'
#4: 4" csg. gun 9436-38', 9208-11', 9201-04', 9184-88', 9164-67', 9127-30'

Wasatch

18. I hereby certify that the foregoing is true and correct

SIGNED

Ronald F. Martin

TITLE Manager of Engineering

DATE

10/15/81

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

CP 10/16/81

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE
(Other instructions on reverse side)Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-H62-2931 -

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Ute

7. UNIT AGREEMENT NAME

Unit

8. FARM OR LEASE NAME

9. WELL NO.

1-14 BIE

10. FIELD AND POOL, OR WILDCAT

Bluebell

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 14-2S-1E

12. COUNTY OR PARISH 13. STATE

Uintah

Utah

1.

OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

PAGE PETROLEUM INC.

3. ADDRESS OF OPERATOR

1801 Broadway, Suite 1700, Denver, CO 80217

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*

See also space 17 below.)

At surface

1522' FEL, 735' FNL

14. PERMIT NO.

43-047-30774

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5062' GR

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐(Other) ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☒(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☐(Other) ☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

10/13/81 Acdz. well w/20,000 gals. 7½% HCl in 5 stages. Diverted each stage w/
75 balls and 50# flakes. ISIP 4100#, 10 min. 4100. Released rig 10/16/81.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Prod. Records Coorn.

DATE 10/31/81

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

P

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931	
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute	
3. ADDRESS OF OPERATOR 1801 Broadway, Suite 1700 P.O.Box 17526 T.A., Denver, Colo. 80217		7. UNIT AGREEMENT NAME Unit	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 1522' FEL, 735' FNL		8. FARM OR LEASE NAME	
14. PERMIT NO. 14-047-30774		9. WELL NO. 1-14-B1E	
15. ELEVATIONS (Show whether DF, RT, OR, etc.) 5062' GR		10. FIELD AND POOL, OR WILDCAT Bluebell	
		11. SEC., T., R., M., OR BLK. AND SUBVY OR AREA Sec 14, T2S, R1E	
		12. COUNTY OR PARISH Uintah	
		13. STATE Utah	

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>
SHOOT OR ACIDIZE <input checked="" type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <u>Additional perforations</u> <input checked="" type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input type="checkbox"/>	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS** (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Page proposes to do additional perforating on this well from 8186' to 8483'. After perforating, if an acid job is necessary the well will be acidized with 5000 gallons HCL.

G. River wasatch

**APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING**

DATE: 12/1/71
BY: [Signature]

RECEIVED
NOV 25 1981
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

SIGNED Ellen Rasmussen TITLE

Roosevelt, Utah
Office Manager

DATE 11-19-81

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other ☐
2. NAME OF OPERATOR
PAGE PETROLEUM INC.
3. ADDRESS OF OPERATOR
P.O. Box 17526, Denver, CO 80217
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1522' FEL, 735' FNL.
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

- TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☐
(other) ☐

SUBSEQUENT REPORT OF:

- ☐
☐
☒
☐
☐
☐
☐
☐
☐

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

11/25/81 MI & RU. Perf'd w/4" csg. gun as follows: #1: 8478-83', 8456-60', 8434-42', 8420-24', 8410-15'; #2: 8396-8408', 8388-92', 8290-94', 8220-26', #3: 8325-44', 8186-94', #4: 8262-83', 8234-44', #5: 8244-56', 8204-8218'. Well started pmpg. 12/3/81. Opened well to pit. Ran 1-11/16", perf gun, stop @ 5320'. Shot 2 holes @ 5320'. Acdz. w/5000 gals. 7 1/2% gelled retarded wtr. ISIP 1600#, 15 min. 1450#. Returned well to production.

G. River
- Wasatch

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED G. G. Robb TITLE Prod. Rec. Coord. DATE 2/5/82

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

Verbal approval obtained from Bill Martin, USGS, 11/19/81.

5. LEASE
14-20-H62-2931
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute
7. UNIT AGREEMENT NAME
Unit
8. FARM OR LEASE NAME
9. WELL NO.
1-14 BIE
10. FIELD OR WILDCAT NAME
Bluebell
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 14-2S-1E
12. COUNTY OR PARISH
Utah
13. STATE
Utah
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
5062' GR

RECEIVED
FEB 10 1982

(NOTE: Report results of completion or zone change on Form 9-330.)

DIVISION OF
OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

SUBMIT IN TRIPLICATE*
(Instructions on reverse side)

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute
3. ADDRESS OF OPERATOR P.O. Box 1656 Roosevelt, Utah 84066		7. UNIT AGREEMENT NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any state requirements. See also space 17 below.) At surface 1522' FEL 735' FNL		8. FARM OR LEASE NAME
14. PERMIT NO. 14-047-30774		9. WELL NO. 1-14-B1E
15. ELEVATIONS (Show whether DF, RT, GR) 5062' GR		10. FIELD AND POOL, OR WILDCAT Bluebell
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec 14, T2S, R1E		12. COUNTY OR PARISH Uintah
13. STATE Utah		

RECEIVED
MAY 03 1982

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

☐
☐
☒
☐

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

☐
☐
☐
☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

☐
☐
☐

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

☐
☐
☐

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Page intends to treat the interval from 8100' to 8516' with 400 barrels of 1% acetic acid with silt suspending agent, emulsion controller, and 10% zylene added. One diverter stage of 500 # of benzoic acid flakes would be dropped after 100 barrels pumped.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 5/4/82

BY: R. S. Smith

18. I hereby certify that the foregoing is true and correct

SIGNED

Ellen Laermussen

TITLE

Roosevelt office manager

DATE

4-30-82

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
GEOLOGICAL SURVEY

STANDARD FORM NO. 100-10
(Other instructions on reverse side)

3

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-H62-2931
2. NAME OF OPERATOR Page Petroleum Inc.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute
3. ADDRESS OF OPERATOR P.O. Box 1656 Roosevelt, Utah 84066		7. UNIT AGREEMENT NAME Unit
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface 1522' FEL, 735' FNL		8. FARM OR LEASE NAME
14. PERMIT NO. 14-047-30774		9. WELL NO. 1-14 BLE
15. ELEVATIONS (Show whether SF, ST, GR, etc.) 5062' GR		10. FIELD AND POOL, OR WILDCAT Bluebell
		11. SEC., T., R., N., OR BLK. AND SURVEY OR AREA Sec 14, T2S, R1E
		12. COUNTY OR PARISH Uintah
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

X

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

FULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Douglas Creek member of the Green River formation will be fraced using gelled water-versagel 1500. Pad will be 2% KCL with 50#/m WG-11, 1.5 g/m CL-18, 1 g/m TRI-S, .1 g/m BE-3, 40#/m WAC-11 and breakers.

Total fluid: 92,770 gallons. Sand: 266,000 pounds of 20/40 mesh.

Swab well for clean up and return to production.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 11/12/83

BY: [Signature]

18. I hereby certify that the foregoing is true and correct

SIGNED Ellen Rasmussen

TITLE Roosevelt Office Manager

DATE 7-5-83

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other ☐

2. NAME OF OPERATOR
Page Petroleum Inc.

3. ADDRESS OF OPERATOR
P.O. Box 17526 T.A. Denver, CO 80217

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1522' FEL, 735' FNL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. LEASE
14-20-H62-2931

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME
Unit

8. FARM OR LEASE NAME

9. WELL NO.
1-14 B1E

10. FIELD OR WILDCAT NAME
Bluebell

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 14, T2S, R1E

12. COUNTY OR PARISH
Uintah

13. STATE
Utah

14. API NO.

15. ELEVATIONS (SHOW DF, KDB, AND WD)

REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐ ☒

FRACTURE TREAT ☐ ☒

SHOOT OR ACIDIZE ☐ ☐

REPAIR WELL ☐ ☐

PULL OR ALTER CASING ☐ ☐

MULTIPLE COMPLETE ☐ ☐

CHANGE ZONES ☐ ☐

ABANDON* ☐ ☐

(other) ☐ ☐

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

7/12/83 MIRU. Set RTTS pkr @ 8110'. Fraced perfs 8186-8483' (136').
Pmpd 25,000 gals pad, 25 BPM @ 7500#, 4000 gals Versagel,
1 #/gal 20/40 sand, 25 BPM @ 6800#, 8000 gals Versagel w/2#/gal
20/40 sand @ 25 BPM @ 6800#, inc. to 4#/gal 20/40 sand @ 25 BPM
@ 6980#. Swbd well. Inst. jet pmp. Put well back on production.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 8/10/83
BY: [Signature]

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Prod. Rec. Coord DATE 8/10/83

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

File in Duplicate

DIVISION OF OIL, GAS AND MINING
OF THE STATE OF UTAH

DESIGNATION OF OPERATOR

The undersigned producer, operator, transporter, refiner, gasoline or initial purchaser who is conducting oil and/or gas operations in the State of Utah, does, pursuant to the Rules and Regulations and Rules of Practice and Procedure of the Division of Oil, Gas and Mining of the State of Utah, hereby appoint Graham Energy, Ltd., whose address is 3510 N. Causeway, Metairie, LA, (his, her or its) designated operator to accept and to be served with notices from said Board, or from other persons authorized under the Oil and Gas Conservation Act of the State of Utah.

The undersigned further agrees to immediately report in writing, all changes of address of the operator, and any termination of the operator authority, and in the latter case, the designation of a new operator or operator shall be immediately made. This designation of operator, however, shall remain in full force and effect until and unless a new designation operator is filed in accordance with said statute and said regulations.

Effective date of designation March 1, 1984

Company Page Petroleum, Inc. Address P.O. Box 17526 T.A., Denver, CO80217

By Harvey L. Baker (signature) Title Vice President

Harvey L. Baker

PAGE

PETROLEUM INC.

February 17, 1984

FEB 20 1984

Donald G. Prince
State Lands
3100 State Office Building
Salt Lake City, Utah 84114

DIVISION OF
OIL, GAS & MINING

Division of Oil, Gas, and Mining
4241 State Office Building
Salt Lake City, Utah 84114

Re: Designation of Operator
Graham Energy, Ltd.
Uintah Basin Prospect
Duchesne and Uintah Counties, UT

Gentlemen:

Enclosed, please find one originally executed Designation of Operator form as above referenced.

As of March 1, 1984, Graham Energy, Ltd. is the designated Operator of those wells and leases currently operated by Page Petroleum Inc. The wells affected are:

<u>Well</u>	<u>Location</u>	<u>County</u>
F. J. Fenzl	15-2S-2W	Duchesne
Jensen-Fenzl #1	20-3S-5W	Duchesne
Page #2-20-C5	20-3S-5W	Duchesne
Page Ute Tribal K-1	1-3S-6W	Duchesne
Page Ute Tribal 2-2-C6	2-3S-6W	Duchesne
Page Stewart B-1	2-3S-6W	Duchesne
Page Ute Tribal 1-9-C6	9-3S-6W	Duchesne
Page Ute Tribal C-1	11-3S-6W	Duchesne
Page Ute Tribal 2-11-C6	11-3S-6W	Duchesne
Page Ute Tribal E-1	12-3S-6W	Duchesne
Page Ute Tribal E-2	12-3S-6W	Duchesne
Page Ute Tribal F-1	13-3S-6W	Duchesne
Page Ute Tribal 2-13-C6	13-3S-6W	Duchesne
Page Ute Tribal L-1	23-3S-6W	Duchesne
Page Ute Tribal 2-23-C6	23-3S-6W	Duchesne
Page Ute Tribal G-1	24-3S-6W	Duchesne
Page Ute Tribal P-1	3-2S-1E	Uintah
Page Ute Tribal O-1	4-2S-1E	Uintah
Earl Gardner B-1	9-2S-1E	Uintah
Page Ute Tribal 1-10-B1E	10-2S-1E	Uintah
Page Ute Tribal 1-11-B1E	11-2S-1E	Uintah
Page Ute Tribal 1-14-B1E	14-2S-1E	Uintah

February 17, 1984
Page two

This designation affects operatorship, not ownership, of the subject properties. If you have any questions concerning this notice, please contact me.

Very truly yours,

PAGE PETROLEUM INC.

A handwritten signature in cursive script, appearing to read "V. Parks".

Victoria M. Parks
Landman

VMP/ju
Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

RECEIVED

1. oil ☒ gas ☐ other ☐
well well

2. NAME OF OPERATOR

Graham Energy

3. ADDRESS OF OPERATOR

P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See Space 17 below.)

AT SURFACE: 1522' FEL 735' FNL

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☒

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) ☐

SUBSEQUENT REPORT OF:

☐

☐

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☐

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☐

☐

☐

LEASE

14-20-H62-2931

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Ute Tribal

9. WELL NO.

1-14-BLE

10. FIELD OR WILDCAT NAME

Bluebell East

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec 14, T2S, R1E

12. COUNTY OR PARISH

Uintah

13. STATE

Utah

14. API NO.

14-047-30774

15. ELEVATIONS (SHOW DF, KDB, AND WD)

5062' GR.

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

G. R. R. WASATCH

Intervals between 8530' and 9640' will be perforated with a 4" casing gun, 2 jet shots per foot.

Set retrievable bridge plug at 9650' and packer at 9100'.

Acidize with 6,000 gallons 15% HCL. Displace acid to perms with water.

Return well to production.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Ellen Hassmussen TITLE Office Manager/ DATE 3-18-85

Cochrane Resources/Agent for Graham Energy

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL IF ANY:

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

*See Instructions on Reverse Side

DATE: 3/27/85

BY: John R. Baya

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil ☒ well gas ☐ well other ☐

2. NAME OF OPERATOR
Graham Energy

3. ADDRESS OF OPERATOR
P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 1522' FEL 735' FNL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

5. CASE
14-20-H62-2931

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Ute Tribal

9. WELL NO.
1-14B1E

10. FIELD OR WILDCAT NAME
Bluebell East

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 14, T2S, R1E

12. COUNTY OR PARISH 13. STATE
Duchesne Utah

14. API NO.
14-047-30774

15. ELEVATIONS (SHOW DF, KDB, AND WD)
5062' GR.

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐

FRACTURE TREAT ☐

SHOOT OR ACIDIZE ☐

REPAIR WELL ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPLETE ☐

CHANGE ZONES ☐

ABANDON* ☐

(other) ☐

SUBSEQUENT REPORT:

☐

☒

☐

☐

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☐

☐

☐

RECEIVED

APR 17 1985

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

DIVISION OF OIL
GAS & MINING

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Perforated well in the following intervals with 2SPF with 4" casing guns:

9636'-40'	9620'-24'	9574'-76'	9550'-54'
9520'-24'	9390'-95'	9363'-67'	9352'-56'
9340'-44'	9325'-27'	9307'-10'	9152'-56'
8618'-24'	8580'-86'	8568'-72'	8530'-35'

Set bridge plug at 9650', packer at 9110' and acidized perms with 6,000 gallons 15% HCL and 3,000# benzoic acid flakes in 3 stages with slight diversion of each stage.

Set bridge plug at 8699' and packer at 8508' and acidized well with 3,000 gallons 7 1/2% HCL and 1,000# benzoic acid flakes in 2 stages. Placed well back on production.

Subsurface Safety Valve, Manul. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Ellen Rasmussen TITLE Office Manager/ DATE 4-16-85
Cochrane Resources Inc/Agent for Graham Resources
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL IF ANY:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY **070924**

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 5-331-C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR
Graham Energy, Inc.

3. ADDRESS OF OPERATOR

P.O. Box 1656 Roosevelt, Utah 84066

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)

AT SURFACE: 1522' FEL 735' FNL

AT TOP PROD. INTERVAL:

AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
CHANGE ZONES ☐
ABANDON* ☒
(other)

SUBSEQUENT REPORT OF:

RECEIVED
JUL 08 1986
DIVISION OF
OIL, GAS & MINING

5. LEASE
14-20-1462-2931
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Ute
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
Ute Tribal
9. WELL NO.
1-14 BLE
10. FIELD OR WILDCAT NAME
Bleubell East
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 14- T2S R1E
12. COUNTY OR PARISH
Duchesne
13. STATE
Utah
14. API NO.
43-047-30774
15. ELEVATIONS (SHOW DF, KDB, AND WD)
5062 GR

NOTE: Report results of multiple completion or zone change on Form 5-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Graham Energy proposes to plug and abandon the subject well as follows:

1. Set 5" plug at 9750", (45" into 5" liner) and cap with 2 sks cement.
2. Set 7 5/8" CIBP at 8000', and cap with 2 sks cement. Pressure test csg to 1000 psi.
3. Set 200' cement plug from 6000' to 6200'.
4. Set 200' cement plug from 4000' to 4200'.
5. Set 200' cement plug from 2000' to 2200'.
6. Set 200' surface plug in 7 5/8" csg and 200' plug in 10 3/4" - 7 5/8" annulus.
7. Erect dry hole marker and restore location.

Subsurface Safety Valve: Manu. and Type

Set @ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED K. B. Allen TITLE Agent/ Graham Energy DATE July 3, 1986

(This space for Federal or State office use)

APPROVED BY
CONDITIONS OF APPROVAL IF ANY:

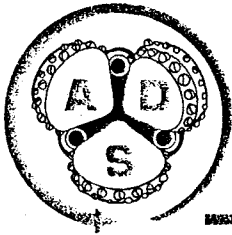
TITLE DATE

Federal approval of this action is required before commencing operations.

*See Instructions on Reverse Side

**ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING**

DATE 7-8-86
BY John R. Baya



APPLIED DRILLING SERVICES, INC.

OILFIELD CONSULTANTS AND OPERATIONS MANAGEMENT

Rt. 1 Box 1764
Roosevelt, Utah 84066
801-722-5087

P.O. Box 62055
Littleton, Colorado 80120
303-973-6189

APR 06 1988
DIVISION OF
OIL, GAS & MINING

April 4, 1988

Division of Oil, Gas & Mining
355 West No. Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

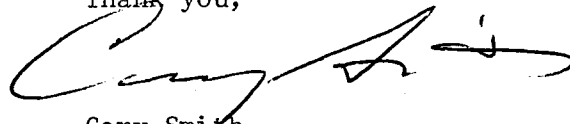
RE: Enclosed Sundry Notices

Dear Sir:

Enclosed are copies of the Department of Interior Sundry Notices noting change of operator.

These are for your information and records.

Thank you,



Cary Smith

CS/vm

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> <i>N9450 Graham Resources to</i>	5. LEASE DESIGNATION AND SERIAL NO. <i>14-20-H62-2898 POW/WSTC</i>
2. NAME OF OPERATOR <i>Lehndorff/Downtech Joint Venture N8160</i>	6. IF INDIAN, ALLOTTEE OR TRIBE NAME <i>Ute</i>
3. ADDRESS OF OPERATOR <i>Rt. 1 Box 1764, Roosevelt, Utah 84066</i>	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) <i>At surface</i> <i>Section 14 T2S, R1E</i> <i>735' FNL 1522' FEL</i>	8. FARM OR LEASE NAME <i>Ute Tribal</i>
12. PERMIT NO. <i>43-047-30774</i>	9. WELL NO. <i>1-14B1E</i>
15. ELEVATIONS (Show whether DF, RT, CR, etc.)	10. FIELD AND POOL, OR WILDCAT
	11. SEC., T., R., M., OR B.L. AND SURVEY OR AREA <i>Sec. 14, T2S, R1E</i>
	12. COUNTY OR PARISH <i>Uintah</i>
	13. STATE <i>Utah</i>

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>
(Other) <input checked="" type="checkbox"/> <i>Change of Operator</i>	(Other) <input checked="" type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

To notify the BLM of the following:

- The new operator is: Lehndorff/Downtech Joint Venture
2501 Cedar Springs Road
Dallas, Texas 75201
- The operator's Utah office is as above (lines 2&3) and all correspondence should be mailed to the Roosevelt, Utah address, Attn: Cary Smith
- The repair of this well will include the injection of approximately ten barrels of hydrocarbons per day for an experimental enhanced recovery technique. The control of accounting will be through sales tickets of fluid delivered to the well site subtracted from produced oil.

Please hold all reports confidential - TIGHT HOLE

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

DATE

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Lease issued containing Well # 1-14 B1E

U & O (November 8, 1985)
UDCS - 82A

TRIBAL LEASE NO. 14-20-H62-4406

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
OIL AND GAS EXPLORATION AND DEVELOPMENT LEASE
TRIBAL INDIAN LANDS



THIS LEASE, made and entered into in quintuplicate among the Ute Indian Tribe of the Uintah and Ouray Reservation, Utah, pursuant to the Indian Reorganization Act (25 U.S.C. 461 et seq.), Indian Mineral Development Act of 1982 (25 U.S.C. 2101-2108), and other applicable acts, Lessor; the Ute Distribution Corporation, a Utah Corporation, organized with authority under the Ute Partition and Termination Act (25 U.S.C. 677-677aa), to receive certain proceeds from minerals held in trust by the United States for the Lessor; and Lehndorff/LGB Minerals, Inc.; Lessee;

WITNESSETH, that:

Definitions.

(a) "Authorized Federal Officer" (herein referred to as the A.F.O.) means such Officer as the Secretary may designate to supervise oil and gas operations on the Indian lands covered by this lease.

(b) "Gas" means natural gas deposits, either combustible or non-combustible, recovered at the surface in the gaseous state, including helium gas, carbon dioxide gas, and sulfur

gas; and hydrocarbons recovered at the surface as liquids which are the result of condensation caused by reduction of pressure and temperature of hydrocarbons originally existing in a reservoir in a gaseous state.

(c) "Oil" means a mixture of hydrocarbons that originally existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities.

(d) "Paying Quantities" means sufficient production to produce income in an amount necessary to (a) operate and maintain the well, (b) maintain the lease, (c) market the product and (d) result in a profit.

(e) "Payout" means that point in time when any well located on the property covered hereby shall have produced 27,000 barrels of oil or the value equivalent of gas.

(f) "Secretary" means the Secretary of the Interior or his representative.

(g) "Superintendent" means the Superintendent of the Uintah and Ouray Agency, Fort Duchesne, Utah.

(h) "Tribe" means the Ute Indian Tribe of the Uintah and Ouray Reservation, Utah.

(i) "Value" shall be determined by the A.F.O. Value may, in the discretion of the A.F.O., be calculated on the basis of the highest price paid or offered (whether calculated on the basis of short or actual volume) at the time of production for a significant portion of oil of the same

gravity, or gas, removed or sold from the field where the leased lands are situated for the actual volume of the marketable product less the content of foreign substances as determined by the A.F.O. The actual amount realized by the Lessee from the sale of said products may, at the discretion of the A.F.O., be deemed mere evidence of or conclusive evidence of such value.

2. Lessor, in consideration of a payment of \$10,000, \$1,000 thereof paid to the Superintendent, receipt of which is hereby acknowledged and \$9,000 thereof to be paid to the Superintendent within fifteen (15) days after any well on the leased lands reaching production in Paying Quantities, and in consideration of rents and royalties to be paid, and the covenants to be observed as herein set forth; Provided, that should Lessee expend funds to make that well existing on the lease premises on the date hereof operable, Lessor may credit such expenditures against cash payment sums due the Superintendent, does hereby grant and lease to the Lessee the exclusive right and privilege to drill for, extract, remove, and dispose of all the oil and gas deposits in or under the following-described tracts of land situated in the County of Duchesne, State of Utah, and more particularly described as follows: Section 14, NE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ W $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, Township 2 South, Range 1 East containing 270.0 acres more or less; limited to the base of the Wasatch Formation, or, if the Wasatch Formation is not present or cannot be identified, to the base of the Tertiary System for a

field where the
volume of the
maximum ultimate term of thirty (30) years, together with the
right to construct and maintain thereupon such structures
necessary for the development and operation of the leased
substances for the term of nineteen (19) months, herein
referred to as the primary term, from and after the approval
hereof by the Secretary and for a period of twenty-eight (28)
years and five (5) months hereafter as long as oil or gas is
produced in Paying Quantities from said land; Provided, that
should the Lessee at any time during the primary or extended
term hereof be adjudged a bankrupt, either upon Lessee's
voluntary petition or Lessee's creditors, or any of them, or
should an attachment be levied and permitted to remain for a
period of one hundred and eighty (180) days upon or against the
interest, rights or privileges of Lessee in or to any oil, gas
or other hydrocarbon substances produced from any well or wells
of Lessee on the lands covered hereby, then all of the
interests, rights and privileges of Lessee in and to all oil,
gas or other hydrocarbons hereunder shall immediately cease,
terminate and end, and in such event Lessor shall have, and
Lessee hereby gives the Lessor, the right, option and privilege
to cancel and terminate this agreement and all the terms and
provisions granted thereby, and all the rights and privileges
of Lessee in and to or upon the land covered hereby, and in and
to any oil, gas or other hydrocarbon substances produced and
saved from such lands, and all of Lessee's rights and
privileges granted by this Agreement shall immediately cease

and terminate and end upon the Lessor so exercising its option in writing approved by the Secretary. There must be actual production in Paying Quantities of any of the aforesaid minerals prior to the expiration of said primary term in order for this lease to continue beyond said primary term. If a producing well stops producing, for any reason after the primary term has ended the lease shall thereupon cease unless diligent continuous efforts are actually commenced by the Lessee within 120 days to restore production in paying Quantities from that well or to obtain production in Paying Quantities from a new well on the leased premises, and production in paying quantities is restored or obtained within 180 days after the cessation of production. No right is given herein to drill for, mine, extract, remove or dispose of gilsonite, oil shale, native asphalt, tar sands, or solid or semisolid bitumen or bituminous rock.

3. Lessee agrees:

(a) Rental. To pay an annual rental on or before each anniversary of the Effective Date of this Lease while the Lease remains in effect at a rate of five dollars (\$5.00) per mineral acre covered by the Lease, such rental to be neither credited against royalties nor any other sums due hereunder.

(b) Royalty. To pay a royalty on the Value of all oil and gas extracted from the leased land on a well-by-well basis as follows:

(i) Pre-Payout Royalty: Beginning on the date of first production from any oil or gas well or wells placed on the acreage covered hereby, Lessee shall pay to Lessor a royalty of eighteen percent (18%) of the proceeds of such production. Said eighteen percent (18%) royalty shall remain in effect, on a per well basis, unless and until a well under production reaches Payout.

(ii) Royalty Conversions: In the event a well or wells placed on the land covered hereby shall reach Payout, no later than forty-five (45) days from Payout of such well Lessee shall notify Lessor in writing of such well or wells reaching Payout. Not later than forty-five (45) days from receipt of Payout notification, Lessor shall exercise a cost free option to increase its royalty to twenty-five percent (25%) of the actual proceeds of all production occurring subsequent to well Payout, such increased royalty to be retroactive to 7:00 a.m. the day following a well reaching Payout. Said twenty-five percent (25%) royalty shall remain in effect unless and until that well to which such royalty applies produces 54,000 barrels of oil. If such well produces 54,000 barrels of oil, no later than forty-five (45) days thereafter Lessee shall notify Lessor in writing of such well or wells producing 54,000 barrels of oil. Not later than forty-five (45) days from receipt of this notification, Lessor shall exercise a cost free option to increase its royalty to thirty-two percent (32%)

of the actual proceeds of all production occurring subsequent to such well producing 54,000 barrels of oil, such increased royalty to be retroactive to 7:00 a.m. the day following a well reaching such point or to become a net profits interest owner in such well; Provided, that if Lessor shall fail to notify Lessee of its conversion selection within the required forty-five (45) days, that Lessor shall be irrevocably presumed to have chosen an increase in royalty rate and to have forever relinquished its privilege to become a net profit interest owner in the well the subject of the notification and; Provided Further, that Lessor's failure to elect to become a net profits interest owner in any given well shall neither relieve Lessee of the duty to supply notices concerning subsequent wells nor deprive Lessor of the right to elect to become a net profits interest owner of wells.

(iii) Net Profit Interest: When a well is selected by lessor as a net profit interest project, Lessor shall thereupon relinquish its royalty interest in said well and, in lieu thereof, receive from Lessee fifty percent (50%) of the net profits from operations of said well as determined in accordance with the provisions of Exhibit A hereof, such net profit interest of Lessor to be retroactive to 7:00 a.m. of the day following a well reaching payout; Provided, that in no event shall Lessor be considered liable for any drilling, completion, operating, or other costs accruing

prior to Lessor moving to a net profits position. Excepting, that any oil and gas used by the Lessee for development and operation purposes on site shall be royalty free. Royalty payments shall be made monthly, on or before the last day of the calendar month following the calendar month for which such payment is owed.

(d) Payment. That all monetary payments shall be made according to 25 C.F.R. 211.12.

Payments shall be divided and:

(i) 72.83814% thereof made out to the Bureau of Indian Affairs for the Ute Indian Tribe, and payments sent to Mineral Management Service, Royalty Management Program, Box 5760, Denver, Colorado 80217; and

(ii) 27.16186% thereof sent directly to the Bureau of Indian Affairs, Uintah and Ouray Agency, P.O. Box 130, Fort Duchesne, Utah 84026, for the Ute Distribution Corporation.

(e) Bond. To furnish such bonds as may be required by the Superintendent, with satisfactory surety, or United States bonds as surety therefore, conditioned upon compliance with the terms of this lease.

(f) Future Development.

(i) That the A.F.O. may either require the drilling and production of such wells as, in his opinion, are necessary to ensure compliance with any applicable spacing order, or in lieu thereof require the payout of an amount

as determined by the A.F.O. to compensate the Lessor in full each month for the estimated loss of royalty.

(ii) To drill and produce all wells necessary to offset or protect the leased land from drainage, including drainage occurring from production on other lands of the Lessor under lease at a lower royalty rate, or in lieu thereof, to compensate the Lessor in full each month for the estimated loss of royalty through drainage. The necessity for offset wells shall be determined by the A.F.O. Payment in lieu of drilling and production shall be with the consent of, and in an amount determined by the A.F.O.

(iii) To drill and produce other wells, at the election of the Lessee, subject to any system of well spacing or production allotments authorized and approved under applicable law or regulations, approved by the Secretary and affecting the field or are in which the leased lands are situated.

(iv) In the event the AFO directs the Lessee to drill and produce any well pursuant to subparagraphs (i), (ii) or (iii) hereof, the parties agree to amend the pricing provisions of this lease to reflect the then existing costs of drilling such a well.

(g) Monthly Statements. To furnish to the A.F.O., the Superintendent, and the Lessor monthly statements in detail in such form as may be prescribed by the Secretary, showing the

amount, quality, and value of all oil and gas produced and saved during the preceding calendar month as a basis upon which to compute the royalty due the Lessor. The lease premises and all wells, producing operations, improvements, machinery, and fixtures thereon and connected therewith and all books and accounts of the Lessee pertaining thereto shall be open at all times for the inspection of duly authorized representatives of the Lessor and the Secretary.

(h) Log of Well. To keep a log in the form prescribed by the Utah Board of Oil, Gas and Mining of all the wells drilled by the Lessee showing the strata and character of the formations passed through by the drill and furnish a copy thereof to the A.F.O. and the Lessor.

(i) Diligence, Prevention of Waste.

(i) To exercise reasonable diligence in drilling and operating wells for oil and gas on the lands covered hereby, while such products can be secured in paying quantities;

(ii) To carry on all operations hereunder in a good and workmanlike manner in accordance with approved methods and practice, having due regard for the prevention of waste of oil or gas developed on the land, or the entrance of water through wells drilled by the Lessee to any strata containing useable or potable water or to the productive sands or oil or gas-bearing strata to the destruction or injury of the useable or potable water or of the oil or gas

deposits, the preservation and conservation of the property for future productive operations, and to the health and safety of workmen and employees;

(iii) To plug securely all wells before abandoning the same and to effectually shut off all water from the oil or gas-bearing strata, from any other strata containing water of potential value;

(iv) Not to drill any well within 500 feet of any house structure, or reservoir of water without the Lessor's written consent;

(v) To carry out at the expense of the Lessee all orders and requirements applicable to this Agreement of the A.F.O. as defined in 43 C.F.R. Part 3160;

(vi) To bury all pipelines crossing tillable lands below plow depth unless other arrangements therefore are made with the Superintendent and the Lessor; and

(vii) To pay the Lessor all damages to crops, buildings, and other improvements of the Lessor occasioned by the Lessee's operations, except, that the Lessee shall not be held responsible for casualties occasioned by causes beyond the Lessee's control.

(j) Regulations. To abide by and conform to the applicable regulations of 25 C.F.R., 30 C.F.R., and 43 C.F.R. and any and all other regulations and manuals of the Secretary now or hereafter in force relative to oil and gas leases, excepting only that no regulation hereafter approved shall

effect a change in rate of royalty or rental herein specified without the written consent of the parties to this Lease.

(k) Assignment. Not to assign, sublet, or transfer this Lease or any interest herein by an operating agreement or otherwise before restrictions are removed, except with the written approval of the Superintendent. If this Lease is divided by the assignment of an entire interest in any part of it, each part shall be considered a separate lease under all the terms and conditions of this Lease, excepting only the acreage committed thereto.

4. Cooperative Unit or Other Plan. In the event that a portion of the Lease is committed to a cooperative unit or other plan, any portion of this Lease not included in the cooperative unit or other plan shall thereby become a separate lease, with the same Lessor and Lessee and subject to all the terms of this Lease, excepting only the acreage committed thereto. This Lease may not be made subject to a cooperative unit or other plan without authorization of the Tribe and approval of the Superintendent, such authorization and approval shall not be unreasonably withheld.

5. The Lessor expressly reserves:

(a) Use and disposition of remaining estate. The right to lease, sell, or otherwise dispose of or use the remaining estate of lands embraced within this lease under existing law, or laws hereafter enacted, subject to the rights of the Lessee.

(b) Royalty in Kind. The right to elect on 30 days written notice to take royalty in kind subject to the terms of Paragraph 3(d) hereof.

6. Surrender. the Lessee may surrender this Lease or any part hereof upon the payment of the sum of one hundred dollars (\$100) and all rentals, royalties, and other obligations due and payable and upon a showing satisfactory to the Superintendent that full provision has been made for conservation and protection of the surface and mineral estates and the proper abandonment of all wells. The Lease will continue in full force and effect as to the lands not surrendered. If this Lease has been recorded in the office of the County Recorder, the Lessee shall record a release.

7. Cancellation. When there has been a violation of any of the terms and conditions of this Lease or applicable regulations, the Superintendent shall have the right to declare this Lease cancelled, if the Lessee has failed to remedy the violation within 180 days of receipt of notice from the Superintendent of such violation, as to all the lease area or as to a part of the lease area, in accordance with applicable regulations.

8. Removal of buildings, structures, etc. Lessee shall be the owner of and shall have the right to remove from the leased premises, within 90 days after termination of this lease, any and all buildings, structures, casing material and equipment placed on the surface of the leased premises by the

Lessee for the purpose of development and operation hereunder; Excepting, that all buildings, structures, casing material and equipment, whether on the surface or otherwise, necessary for drilling or rehabilitation of wells shall, at the option of the Lessor, become the property of the Lessor and that all materials and equipment present on the premises on the date hereof or such materials or equipment as are purchased with funds deducted under paragraph 2 hereof are and shall remain Lessor's property, with Lessee being bestowed with the right to use and employ the same during the continued validity of this Lease.

9. Conservation. The Lessee in consideration of the rights herein granted agrees to abide by the applicable provisions of any act of Congress, or any other regulation prescribed pursuant thereto, relating to the conservation, production, or marketing of oil or gas.

10. Heirs and Successors in Interest. Each obligation hereunder shall extend to and be binding upon, and every benefit hereof shall inure to, the heirs, executors, administrators, successors of, or assigns of the respective parties hereto.

11. Conflict of Interest. No lease, assignment thereof, or interest therein, will be approved to any employee or employees of the United States Government whether connected with the Indian Service or otherwise and no employee of the Interior Department shall be permitted to acquire any interest

in any mineral lease covering restricted Indian lands by ownership of stock in corporations having such leases or in any other manner.

12. Preference. In connection with the performance of work under this Agreement, the Lessee agrees to take affirmative steps to train and employ Ute Indians and to notify the employment office of the Ute Indian Tribe of all specifications for subcontracts and requirements of goods, service and employment with the intent that Indians of the Northern Ute Tribe be given a preference to supply goods, services, and employment.

13. Confidentiality. All information submitted to the Secretary or Superintendent in connection with this Agreement or the transactions contemplated hereby shall be deemed proprietary information of Lehndorff/USP or the Tribe, as the case may be, and shall be submitted in such form and manner as may be required to protect the confidentiality of such information under the Privacy Act (5 U.S.C. § 552(a)), as amended from time to time.

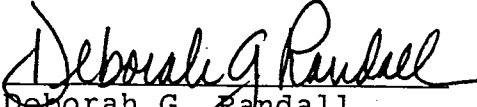
WHEREFORE, the Ute Tribe, and Lehndorff/LGB Minerals, Inc. do hereby make and enter into this Net Profits Lease on the dates below appearing, to be effective as of Secretarial approval hereof.

UTE INDIAN TRIBE

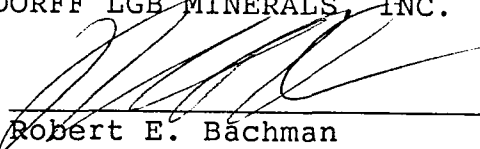
By: 
Lester M. Chapoose, Chairman

Date: 8/3/87

ATTEST:

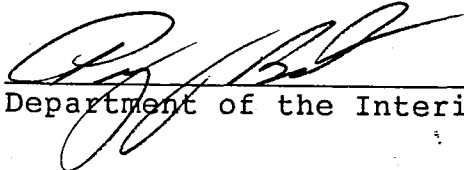

Deborah G. Randall
Assistant Secretary

LEHNDORFF LGB MINERALS, INC.

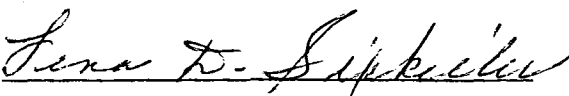
By: 
Robert E. Bachman

Date: 8-21-87

APPROVED THIS 6th DAY
OF October, 1987.

By: 
Department of the Interior

UTE DISTRIBUTION CORPORATION

BY: 
Lena D. Sixkiller, President

It has been determined that approval of this document is not such a major federal action significantly affecting the quality of the human environment as to require the preparation of an environmental impact statement under Section 102 (2)(c) of the National Environmental Policy Act of 1969 (42 U.S.C. § 4332 (2)(c); AND Environmental Assessment of Oil and Gas Development, Duchesne River Area; Environmental Assessment No. 3, Bureau of Land Management, Vernal District, Vernal, Utah; prepared April, 1982.

APPROVED, Bureau of Indian Affairs, Uintah and Ouray Agency, under authority delegated to the Superintendent by Phoenix Area Redlegation Order No. 3, Section 2.17, (34 FR; 11109).

THE LEHNDORFF USA GROUP OF COMPANIES

*Lehndorff USA Limited
Lehndorff USA (Central) Limited
Lehndorff Management (USA) Limited, Inc.
Lehndorff U.S. Equities, Inc.
Lehndorff Geneva, Inc.
Lehndorff Capital Resources, Inc.
Lehndorff/LGB Minerals, Inc.*

*Lehndorff Financial Services, Inc.
Lehndorff Management of California, Inc.
Lehndorff-Pacific, Inc.
Lehndorff Real Estate Brokerage, Inc.
Lehndorff & Babson Real Estate Counsel, Inc.
Noble Associates, Inc.
U.S. Investor's Services, Inc.*

January 31, 1990

RECEIVED
FEB 05 1990

State of Utah
Dept. of Natural Resources
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180

DIVISION OF
OIL, GAS & MINING

ATTN: Division of Oil, Gas & Mining

RE: Lehndorff/Downtech Joint Venture Leases
Duchesne Co., Utah

Gentlemen:

Enclosed please find the Sundry Notices reflecting a change of Operator on the following wells:

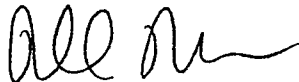
1. Ute #1-31C5
2. Ute Tribal #1-14B1E
3. Ute #1-12B6
4. Ute #1-35B6
5. L.E. Font #3-27Z2

If you require any additional information, please notify the undersigned.

Thank you.

Sincerely,

LEHNDORFF/LGB MINERALS



Randol Rodgers
Vice President - Operations

RR/rr

Enclosures
cc: Ute Indian Tribe

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

RECEIVED
FEB 05 1990

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION & SERIAL NO. 14-20-H62-4406	
2. NAME OF OPERATOR LEHNDORFF/DOWNTech JOINT VENTURE		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ute	
3. ADDRESS OF OPERATOR 2501 CEDAR SPRINGS, #340 DALLAS, TEXAS 75201		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface Sec. 14-T2S-R1E At proposed prod. zone 735' FNL 1522' FEL		8. FARM OR LEASE NAME Ute Tribal	
14. API NO. 43-047-30774		15. ELEVATIONS (Show whether DF, RT, GR, etc.)	
12. COUNTY Duchesne		13. STATE UTAH	

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) CHANGE OPERATOR <input checked="" type="checkbox"/>	
APPROX. DATE WORK WILL START _____	

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) _____	
(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	
DATE OF COMPLETION _____	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

* Must be accompanied by a cement verification report.

This well is shut-in, temporarily abandoned. Lehndorff/Downtech Joint Venture has released the leases and relinquished all operations to the Ute Indian Tribe.

OIL AND GAS	
OPN	R/F
JRB	GLH
DTS	SLS
1-TAS	
MICROFILM	
FILE	

18. I hereby certify that the foregoing is true and correct:

SIGNED RANDOL E. RODGERS
(This space for Federal or State office use)

TITLE Vice President - Operations DATE 1/30/90

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____ DATE _____

RELEASE OF OIL AND GAS LEASE

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, on the 3rd day of September, 1987, the UTE INDIAN TRIBE OF THE UINTAH AND OURAY RESERVATION, UTAH, as Lessor, the Ute Distribution Corporation, a Utah corporation, as trustee for Lessor, and LEHNDORFF/LGB MINERALS, INC., as Lessee, made and entered into a United States Department of the Interior Bureau of Indian Affairs Oil and Gas Exploration and Development Lease for Tribal Indian Lands (the "Lease"), which Lease was approved by the Department of the Interior on October 6, 1987 and recorded in Book 223MR, Page 31-46 of the Deed Records of Duchesne County, State of Utah. Said lease and the rights thereunder given cover and affect the following described lands situated in the aforementioned County and State, to-wit:

Township 2 South, Range 1 East, U.S.M.; Section 14: NE/4NE/4, E/2NW/4NE/4, E/2W/2NW/4NE/4, N/2N/2NW/4NW/4, SW/4SW/4NW/4, W/2NE/4NE/4NW/4, W/2NE4NW/4, W/2SE/4NW/4, W/2SE/4SE/4NW/4, NW/4NW/4SW/4, S/2NW/4SW/4, SW/4SW/4, N/2NE/4SW/4, SW/4NE/4SW/4, W/2SE/4SW/4, W/2E/2SE/4SW/4 and containing 270.00 acres more or less; and

WHEREAS, the Lease expired May 6, 1989.

NOW, THEREFORE, for and in consideration of the sum of Ten Dollars (\$10.00), the receipt of which is hereby acknowledged, Lessee does hereby cancel, release, relinquish, surrender and forever quitclaim unto the named Lessor, its heirs, successors and assigns, the said Lease and all the rights thereunder or incident thereto, insofar as the same applies to or covers the lands hereinabove described.

IN WITNESS WHEREOF, Lessee has executed this instrument this 10th day of December, 1989.

ATTEST:

LEHNDORFF/LGB MINERALS, INC.,
a Texas corporation

By: *Daniel H. Riley*

Daniel H. Riley
Assistant Secretary

By: *Randol Rodgers*

Randol Rodgers
Vice President

STATE OF TEXAS

§
§
§

SS:

COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared Randol Rodgers, Vice President of Lehndorff/LGB Minerals, Inc., known to me to be the person and officer whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity therein stated and as the act and deed of said corporation.

Given under my hand and seal of office this the 6th day
of December, 1989.

My Commission Expires:
ROXANNE RAILSBACK, Notary Public
~~in and for the State of Texas.~~
My commission expires June 22, 1991

Roxanne Railsback
Notary Public in and for
the State of Texas

246

RETURN TO: Caroline N. Roberts
Spears, Plumlee & Masenga
2501 Cedar Springs, Suite 600
Dallas, Texas 75201

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☒ Other Convert to disposal well

2. Name of Operator

Arrow Mud

3. Address and Telephone No.

P. O. Box 127 Whiterocks, UT 84085 801-353-4378

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1522' FEL 735' FNL (NW $\frac{1}{4}$ NE $\frac{1}{4}$) Sec. 14, T2S, R1E, USM

5. Lease Designation and Serial No.
None

6. If Indian, Allottee or Tribe Name
Ute Tribe

7. If Unit or CA, Agreement Designation

8. Well Name and No. Page Exxon
Ute Tribal 1-14B1E

9. API Well No.
43-047-30774

10. Field and Pool, or Exploratory Area
Bluebell East

11. County or Parish, State
Uintah, Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- | | |
|---|---|
| <input type="checkbox"/> Abandonment | <input type="checkbox"/> Change of Plans |
| <input type="checkbox"/> Recompletion | <input type="checkbox"/> New Construction |
| <input checked="" type="checkbox"/> Plugging Back | <input type="checkbox"/> Non-Routine Fracturing |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Altering Casing | <input checked="" type="checkbox"/> Conversion to Injection |
| <input type="checkbox"/> Other _____ | <input checked="" type="checkbox"/> Dispose Water |

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)* To begin upon approval of EPA

Arrow Mud proposes to plug and abandon zones below 5300' and convert to salt water and hazardous waste disposal well in the Evacuation Creek (Lwr. Uinta Fm.) and Upr. Parachute Creek members of the Green River formation as follows:

1. Set 5" CIBP at 9750' (45' into 5" liner) and cap with 2 sks cement;
2. Set 7 5/8" CIBP at 8000' and cap with 2 sks cement;
3. Pressure test casing to 1250 psi;
4. Place 200' balanced cement plug from 6000' to 6200';
5. Set 7 5/8" CIBP at 5315' and cap with 2 sks cement;
6. Pressure test casing to 1250 psi;
7. Run CBL from PBDT to 4500' and perform remedial cement work if necessary and perf 4 spf @ 90° phasing the Green River formation in the following intervals from old KB: 5255-63', 5194-5226', 5155-60', 5120-40', and 5018-44'. (See log excerpts attached hereto);
8. Run packer on end of 2 7/8" tubing to 5000';
9. Pressure test casing-tubing annulus above packer to 1250 psi;
10. Prepare surface facilities for injection.
11. Change well number and name to Ute SWD 1-14B1E

14. I hereby certify that the foregoing is true and correct

Signed Frank Gronchis Title Proprietor, Arrow Mud

Date March 10-92

(This space for Federal or State office use)

Approved by _____
Conditions of approval, if any:

Title _____ Date _____

RECEIVED

SEP 29 1992

September 24, 1992

DIVISION OF
OIL GAS & MINING

Mr. John Carson
U. S. Environmental Protection Agency
Denver Place, Suite 500
999 18th Street (8WM-DW)
Denver, CO 80202-2405

Re: EPA UIC Permit Application
Page Exxon Ute Tribal 1-14B1E
Uintah County, Utah

Dear Mr. Carson:

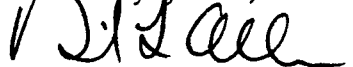
I am pleased to discover that the 1-14B1E application has been assigned there in Denver. I trust that we will be able to work together to insure compliance on this project within a reasonable time frame.

As I mentioned to you via telephone earlier today, it is important that this application be amended to Class II, Type D and Class I, Type I instead of Type W in order to insure that my submittal will comply. The intended use of this well is to be primarily Class II, Type D with occasional use under Class I, Type I.

I believe that our intentions with respect to Class I, Type I usage is outlined in Attachment H to Form 4 on file with your office already. It is important to supplant the term industrial waste for any references in the Form 4 submittal to "hazardous waste" throughout that document.

If you have any questions or comments that need to be addressed on this submittal, please direct them to me, and I will attempt to resolve them with due diligence. Thankyou.

Sincerely yours,



David L. Allin
Consulting Petroleum Geologist

DLA/tc



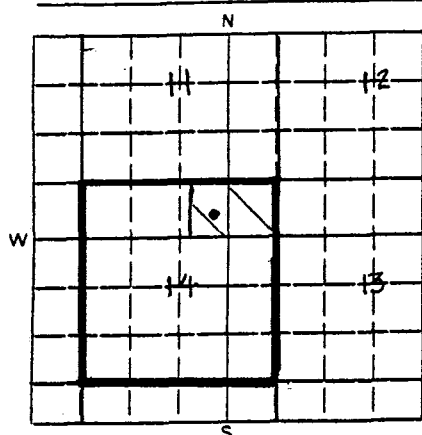
PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY

Ute Salt Water Disposal-Greater Altamont Fld
c/o David L. Allin 323 Center Street #208
Salt Lake City, UT 84103-1628

NAME AND ADDRESS OF OWNER/OPERATOR

Arrow Mud
P. O. Box 127
Whiterocks, UT 84085

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT

STATE

Utah

COUNTY

Uintah

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

SE 1/4 OF NW 1/4 OF NE 1/4 SECTION 14 TOWNSHIP 2S RANGE 1E

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location 735 ft. from (N/S) N Line of quarter section
and 1522 ft. from (E/W) E Line of quarter section

TYPE OF AUTHORIZATION

- ☒ Individual Permit
☐ Area Permit
☐ Rul.

Number of Wells 1

WELL ACTIVITY

- ☒ CLASS I Type W
☒ CLASS II
☒ Brine Disposal (Type D)
☐ Enhanced Recovery
☐ Hydrocarbon Storage
☐ CLASS III

Lease Name Ute Tribal(no lease) Well Number Ute SWD 1-14B1E

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
10.75	40.5		1653	14.75
7.625	26.4 & 29.7		9910	9.75
5.00	18.0 liner		11794-9705	6.75
2.875	6.5 tubing	5000	None	NA

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☒ The Balance Method
☐ The Dump Bailer Method
☐ The Two-Plug Method
☐ Other

CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	7.625	7.625	7.625	10.75	7.625	10.75	
Depth to Bottom of Tubing or Drill Pipe (ft.)	5000	4200	2200	1500	200	200	
Sacks of Cement To Be Used (each plug)	28 CIBP	50	50	50	50	50	
Slurry Volume To Be Pumped (cu. ft.)	3	53	53	53	53	53	
Calculated Top of Plug (ft.)	4994	4000	2000	1270	Surf.	Surf.	
Measured Top of Plug (if tagged ft.)	proposed						
Slurry Wt. (Lb./Gal.)	14	14	14	14	14	14	
Type Cement or Other Material (Class III)	G	G	G	G	G	G	

Proposed LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (If any)

Perfs	From	To	From	To
5255'		5263'	5194'	5226'
5155'		5160'	5120'	5140'
5018'		5044'		

* Well will have been plugged back to 5300' prior to conversion to disposal well.

Estimated Cost to Plug Wells
\$8000.00

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)

Frank Arrowchis, Proprietor

SIGNATURE

Frank Arrowchis

DATE SIGNED

March 10-92

ATTACHMENT R
FORM 4 UIC
SURETY PERFORMANCE BOND

U.S. Environmental Protection Agency
Underground Injection Control
Financial Responsibility Requirement

BOND COVERS THE PLUGGING OF INJECTION WELLS

Date bond executed: July 31, 1992

Effective date: July 31, 1992

Principal: WESTERN OPERATING COMPANY
(Legal name of owner or operator)

518 17th St., Suite 1680, Denver, CO 80202
(Business address of owner or operator)

Type of organization: Corporation
(Individual, joint venture,
partnership, or corporation)

State of incorporation: Colorado

Surety(ies): PLANET INDEMNITY COMPANY
(Name)

410 Seventeenth St., Suite 1675, Denver, CO 80202
(Business address)

EPA identification number, name, address, and plugging and abandonment amount(s) for each injection well guaranteed by this bond. (Indicate plugging and abandonment amounts for each well. Attach separate list if necessary.)

<u>Injection Well Information</u>	<u>Plugging & Abandonment Amount</u>
<u>UTE 114BIE, NW of NE of S14, T2S, R1E, U.S.M.</u>	<u>\$8,000.00</u>
<u>Uintah County, Utah</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

Total penal sum of bond: \$ \$8,000.00

Surety's bond number: B03668

KNOW ALL PERSONS BY THESE PRESENTS, That we, the Principal and Surety(ies) hereto are firmly bound to the U.S. Environmental Protection Agency (hereinafter called EPA), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

WHEREAS said Principal is required, under the Underground Injection Control Regulations, as amended, to have a permit or comply with provisions to operate under rule for each injection well identified above, and

WHEREAS said Principal is required to provide financial assurance for plugging and abandonment as a condition of the permit or approval to operate under rule, and

WHEREAS said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall faithfully perform plugging and abandonment, whenever required to do so, of each injection well for which this bond guarantees plugging and abandonment, in accordance with the plugging and abandonment plan and other requirements of the permit or provisions for operating under rule as may be amended, pursuant to all applicable laws, statutes, rules and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in Subpart F of 40 CFR 144, and obtain the EPA Regional Administrator's written approval of such assurance, within 90 days after the date of notice of cancellation is received by both the Principal and the EPA Regional Administrator(s) from the Surety(ies), then this obligation shall be null and void. Otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by an EPA Regional Administrator that the Principal has been found in violation of the plugging and

abandonment requirements of 40 CFR 144, for an injection well which this bond guarantees performances of plugging and abandonment, the Surety(ies) shall either perform plugging and abandonment in accordance with the plugging and abandonment plan and other permit requirements or provisions for operating under rule and other requirements or place the amount for plugging and abandonment into a standby trust fund as directed by the EPA Regional Administrator.

Upon notification by an EPA Regional Administrator that the Principal has failed to provide alternate financial assurance as specified in Subpart F of 40 CFR 144, and obtain written approval of such assurance from the EPA Regional Administrator(s) during the 90 days following receipt by both the Principal and the EPA Regional Administrator(s) of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the injection well(s) into the standby trust fund as directed by the EPA Regional Administrator.

The Surety(ies) hereby waive(s) notification of amendments to plugging and abandonment plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice by certified mail to the owner or operator and to the EPA Regional Administrator(s) for the Region(s) in which the injection well(s) is (are) located, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the EPA Regional Administrator(s), as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies); provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the EPA Regional Administrator(s) of the EPA Region(s) in which the bonded injection well(s) is (are) located.

(The following paragraph is an optional rider that may be included but is not required.)

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new plugging and abandonment amount, provided that the penal sum does not increase by more than 20% in any one year, and no decrease in the penal

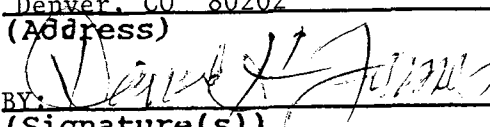
sum takes place without the written permission of the EPA Regional Administrator(s).

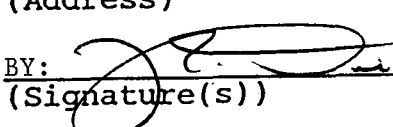
In WITNESS WHEREOF, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording on this surety bond is identical to the wording specified in 40 CFR 144.70(c) as such regulation was constituted on the date this bond was executed.

PRINCIPAL:

CORPORATE SURETY(IES)

WESTERN OPERATING COMPANY
(Name)
518 17th St., Suite 1680
Denver, CO 80202
(Address)
BY: 
(Signature(s))
David H. James, President
(Title(s))

PLANET INDEMNITY COMPANY
(Name)
410 Seventeenth St., Suite 1675
Denver, CO 80202
(Address)
BY: 
(Signature(s))
Roy C. Die, Attorney-in-Fact
(Title(s))

Corporate Seal

Corporate Seal

Colorado
State of Incorporation
\$ 800.00
Bond Premium

Colorado
State of Incorporation
\$ 8,000.00
Liability Limit

(For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.)

GENERAL POWER OF ATTORNEY

CERTIFIED COPY

KNOW ALL MEN BY THESE PRESENTS: That **PLANET INDEMNITY COMPANY**, a corporation organized and existing under the laws of the State of Colorado, and having its principal office in the City of Denver, Colorado does hereby constitute and appoint:

ROY C. DIE

its true and lawful attorney-in-fact to execute, seal and deliver for and on its behalf as surety, any and all bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, which are or may be allowed, required or permitted by law, statute, rule, regulation, contract or otherwise, in an amount not to exceed:

*******FIFTY THOUSAND AND NO/100*******
and the execution of all such instrument(s) in pursuance of these presents, shall be binding upon said **PLANET INDEMNITY COMPANY** as fully and amply, to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal office.

This Power of Attorney is executed, and may be cerified to and may be revoked, pursuant to and by authority of Article V, Section 6(C) of the By-Laws adopted by the Board of Directors of **PLANET INDEMNITY COMPANY**, at a meeting called and held on this third day of March, 1987, of which the following is a true transcript of said Section 6(C):

- "The President or any Vice President, Assistant Vice President, Secretary or Resident Secretary shall have power and authority
- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and
 - (2) to appoint special Attorneys-in-fact, who are hereby authorized to certify to copies of any power-of-attorney issued in pursuance of this section and/or any of the By-laws of the Company, and
 - (3) to remove, at any time, any such Attorney-in-fact or Special Attorney-in-fact and revoke the authority given to him."

Further, this Power of Attorney is signed and sealed by facsimile pursuant to resolution of the Board of Directors of said Company adopted at a meeting duly called and held on the third day of March, 1987, of which the following is a true excerpt:

"Now therefore the signatures of such officers and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached."

IN TESTIMONY WHEREOF, **PLANET INDEMNITY COMPANY** has caused this instrument to be signed and its corporate seal to be affixed by its authorized officer, E. H. Frank, III, on this the twenty eighth day of August, 1991.



E. H. Frank, III

President

E.H. Frank, III

STATE OF COLORADO
COUNTY OF DENVER

On this 28th Day of August, 1991, before me came the individual who executed the preceding instrument, to me personally known, and, being duly sworn, said that he is the therein described and authorized officer of **PLANET INDEMNITY COMPANY**; that the seal affixed to said instrument is the Corporate Seal of said Company; that the said Corporate Seal and his signature were duly affixed by order of the Board of Directors of said Company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal, at the city of Denver, Colorado, the day and year first above written.



Nancy J. Brenholz

Notary Public, Denver County, Colorado

CERTIFICATION

I, the undersigned officer of **PLANET INDEMNITY COMPANY**, do hereby certify that I have compared the foregoing copy of the Power of Attorney and affidavit, and the copy of the Section of the By-Laws of said Company as set forth in said Power of Attorney, and that the same are correct transcripts thereof, and of the whole of the said originals, and that the said Power of Attorney has not been revoked and is now in full force and effect.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 31ST day of JULY, 19 92



Pat Doebling

Assistant Secretary

Pat Doebling

Only a certified copy of Power of Attorney bearing the Certificate of Authority No. printed in red on the upper right corner is binding. Photocopies, carbon copies or other reproductions of this document are invalid and not binding upon the Company.

ANY INSTRUMENT ISSUED IN EXCESS OF THE PENALTY AMOUNT STATED ABOVE IS TOTALLY VOID AND WITHOUT VALIDITY.

STANDBY TRUST AGREEMENT

U.S. Environmental Protection Agency Underground Injection Control Financial Responsibility Requirement

TRUST AGREEMENT, the "Agreement," entered into as of August 7, 1992
(date)

by and between Western Operating Company,
(name of owner or operator)

a Colorado Corporation, the "Grantor,"
(name of state) (corporation, partnership,
association, or proprietorship)

and Zions First National Bank, () incorporated in the
(name of corporate trustee,

State of _____ or (X) a national bank, the "Trustee."

WHEREAS, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an injection well shall provide assurance that funds will be available when needed for plugging and abandonment of the injection well, and

WHEREAS, the Grantor has elected to obtain (X) a surety bond () a letter of credit and establish a standby trust to provide all or part of such financial assurance for the facility(ies) identified herein, and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) "Facility" or "activity" means any underground injection well or any other facility or activity that is subject to regulation under the Underground Injection Control Program.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified in Schedule A (attached). (Schedule A lists, for each facility, the EPA identification number, name, address, and the current plugging and abandonment cost estimate, or portions thereof, for which financial assurance is demonstrated.)

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of EPA. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. Payment for Plugging and Abandonment. The Trustee shall make payments from the Fund as the EPA Regional Administrator shall direct, in writing, to provide for the payment of the costs of plugging and abandonment of the injection wells covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the EPA Regional Administrator from the Fund for plugging and abandonment expenditures in such amounts as the EPA Regional Administrator shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the EPA Regional Administrator specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing, which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 USC 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee, shall be paid from the Fund.

Section 10. Annual Valuation. Commencing after initial funding of the trust, the Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate EPA Regional Administrator a statement confirming the value of the Trust. Any securities in the Fund shall be valued at the market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the EPA Regional Administrator shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instruction by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A, or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the EPA Regional Administrator to the Trustee shall be in writing, signed by the EPA Regional Administrators

of the Regions in which the facilities are located, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EPA hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 15. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate EPA Regional Administrator, or by the Trustee and the appropriate EPA Regional Administrator if the Grantor ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 17. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or by the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 18. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Utah.

Section 19. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF, the parties below have caused this Agreement to be executed by their respective officers duly authorized and the corporate seals to be hereunto affixed and attested as of the date first above written.

Western Operating Company

By:

David H. James
(Signature of Grantor)

David H. James

President

(Title)

Attest:

Brian C. James
Brian C. James
Secretary
(Title)

(SEAL)

Zions First National Bank

By:

(Signature of Trustee)

(Title)

Attest:

(Title)

(SEAL)

CERTIFICATE OF ACKNOWLEDGMENT
FOR
STANDBY TRUST AGREEMENT

STATE OF COLORADO
COUNTY OF ARAPAHOE

On this 7th day of August, 1992, before me personally
came David H. James to me known, who,
(owner or operator,

being by me duly sworn, did depose and say that she/he resides at
X 6191 Cherrywood Circle, Littleton, Colorado 80123,
(address)

that she/he is President of _____
(title)

Western Operating Company, the corporation
(corporation)

described in and which executed the above instrument; that she/he knows
the seal of said corporation; that the seal affixed to such instrument
is such corporate seal; that it was so affixed by order of the Board of
Directors of said corporation, and that she/he signed her/his name
thereto by like order.


(Notary Public)

(Seal)

SCHEDULE A

Identification of Facilities and Cost Estimates

Schedule A is referenced in the trust agreement dated August 7, 1992
by and between Western Operating Company,
(name of owner or operator)
the "Grantor," and Zions First National Bank
(name of trustee)
the "Trustee."

EPA identification number (Applied for)

Name of facility

Address of facility

Current plugging and
abandonment cost estimate

Date of estimate

Ute SWD 1-14B1E

1522' FEL, 735' FNL

Sec. 14, T2S, R1E, USM

Uintah County, Utah

\$8,000.00

March 10, 1992

EPA identification number

Name of facility

Address of facility

Current plugging and
abandonment cost estimate

Date of estimate

SCHEDULE B

Description of Property(s)/Financial Instruments
[Surety(s), Letter(s) of Credit, etc.]

Schedule B is referenced in the standby trust agreement (Section 3)
dated August 7, 1992, by and between
Western Operating Company
(name of owner/operator)
the "Grantor," and Zions First National Bank
(name of trustee)
the "Trustee."

Description of Property(s)/Financial Instrument(s):

1. Surety Performance Bond Dated: July 31, 1992 Number: B03668
Surety Name: Planet Indemnity Company
410 17th Street, Suite 1675
2. Denver, Colorado 80202

ATTACHMENT S
FORM 4 UIC

No aquifer exemption is requested herewith. The proposed injection zone clearly contains brine of 10,000 mg/L of dissolved solids at minimum from DST information.

ATTACHMENT U
FORM 4 UIC

Arrow Mud is a Native American proprietorship engaged in oil field service delivery. Their primary service is water hauling utilizing a fleet of owned and leased trucks. The water hauling service is provided to both to drillers and producers of petroleum wells in the Uinta Basin region. The bulk of the water moved is produced salt water for disposal. This fluid is hauled from petroleum wells for the operator thereof to their own disposal facility or to a commercially operated facility owned by third parties.

Increasingly, the state of Utah has declined to recertify evaporation pits for use in produced water disposal. Furthermore, the state is increasingly concerned about the continued disposal of more than ten million barrels of salt water in the Duchesne River formation. This formation contains drinking water that is now utilized as an USDW in Uintah and Duchesne counties. It will be advantageous to all parties concerned to develop alternatives to continued abuse of the Duchesne River formation.

Arrow Mud wishes to vertically integrate its operations in water disposal from hauling through actual disposal. This is to be accomplished with the assistance of some experienced oil well operating personnel in partnership with the Ute Indian Tribe. The Ute Tribe is providing the 1-14B1E wellbore for the use of Arrow Mud for disposal if approved for that use, and the tribe will participate in profits earned from operations.

This project will serve to begin a program of safe water and waste disposal in the Uinta Basin and is expected to be the first of several wells to be converted for those purposes. Under Indian preference rules, the Arrow Mud facilities should be considered first for use if the costs are competitive. The goal is to provide salt water disposal for the petroleum industry of the Uinta Basin and a hazardous waste receptacle for the indigenous industries and population which will additionally financially benefit the native population.

ALLIN PROPRIETARY / PETROLEUM CONSULTING

August 11, 1992

Ladies and Gentlemen:

I have enclosed for your notification a copy of my client's Application for Injection Well which is being considered currently by the Utah Division of Oil, Gas and Mining. This notification is required by the Oil and Gas Conservation General Rules since you own either surface or minerals within a one-half mile radius of a depleted oil well, the Page Exxon Ute Tribal 1-14B1E, that my client, Arrow Mud of Whiterocks, Utah proposes to convert to a facility for disposal of salt water from other oil wells in the vicinity (EPA Class II, Type "D") as well as semi-hazardous wastes such as used motor oil, antifreeze, paint, and pesticides (EPA Class I, Type "W").

This conversion from oil and gas production to a receptacle for petroleum compatible fluids and waste for this well will be accomplished only with the approval of the Utah Division of Oil, Gas and Mining as well as the U. S. Environmental Protection Agency. These agencies will determine the volume of and types of fluids which can be disposed of in this deep well without risk to potential underground sources of drinking water.

My client, Arrow Mud, as well as the Ute Indian Tribe will have ownership of the proposed facility. The Ute Indian Tribe is now the owner of both the surface and minerals in the facility site and well. The contract operator for the conversion of the well and its future operations will be Western Operating Company of Denver, Colorado.

Copies of the complete conversion applications (Underground Injection Control Permit Application) can be reviewed at the offices of the two supervisory agencies listed below:

Utah Board of Oil, Gas and Mining
Suite 350, III Triad Center
355 West North Temple
Salt Lake City, UT 84180-1203

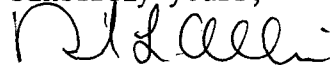
Contact: Gil Hunt
801-538-5340

U. S. Environmental Protection Agency
Underground Injection Control Program
Denver Place, Suite 500
999 18th Street (8WM-DW)
Denver, CO 80202-2405

Contact: Gus Stolz
800-759-4372

I can help you with informal questions and comments, and formal comments must be addressed to the Utah Board of Oil, Gas and Mining in writing.

Sincerely yours,



David L. Allin
Consultant to Arrow Mud

DIA/tc
Enc.

323 Center St., Suite 208, SLC, UT 84103, (801) 521-0215

RECEIVED

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

AUG 12 1992

DIVISION OF			5. Lease Designation and Serial No.
APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK			None
1a. Type of Work			6. If Indian, Allottee or Tribe Name
DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/>			Ute Tribe
b. Type of Well			7. Unit Agreement Name
Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Convert to SWD <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone <input type="checkbox"/>			
2. Name of Operator			8. Farm or Lease Name
Arrow Mud c/o David L. Allin			Ute Tribal
3. Address of Operator			9. Well No. /Convert to
323 Center St., Suite 208 SLC, UT 84103-1628			1-14B1E/Ute SWD 1-14B1E
4. Location of Well (Report location clearly and in accordance with any State requirements.)*			10. Field and Pool, or Wildcat
At surface 1522' FEL 735' FNL			Bluebell East
At proposed prod. zone 1522' FEL 735' FNL (At proposed injection zone)			11. 00, Sec., T., R., N., or Blk. and Survey or Area NWNE
14. Distance in miles and direction from nearest town or post office*			Sec. 14, T2S, R1E, USM
8 miles east of Roosevelt, Utah			12. County or Parrish
			Utah
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drilg. line, if any) 585'			13. State
16. No. of acres in lease 70 acre tract			Utah
17. No. of acres assigned to this well 70 acres			
18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft. None			
19. Proposed depth			
20. Rotary or cable tools			
21. Elevations (Show whether DF, RT, GR, etc.)			22. Approx. date work will start*
5068' GR and Casinghead			April 1, 1991

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement

Arrow Mud proposes to plug and abandon zones below 5300' and convert to salt water disposal well in the Gr. River Fm as follows (Refer to UIC Form 1):

1. Set 5" plug at 9750' (45' into 5" liner) and cap with 2 sks cement;
2. Set 7 5/8" CIBP at 8000' and cap with 2 sks cement;
3. Pressure test casing to 1250 psi;
4. Set 200' cement plug from 6000' to 6200';
5. Set 7 5/8" CIBP at 5315' and cap with 2 sks cement;
6. Pressure test casing to 1250 psi to comply with R615-5-5-2;
7. Run CBL from PBD to 4500' and perf 4 spf 90° phasing the Gr. River Fm. in the following intervals from old KB: 5255-63'; 5194'-5226'; 5155-60'; 5120-40'; 5018-44' (Refer to open hole logs on file or excerpts filed with UIC Form 1)
8. Run packer on end of 2 7/8" tubing to 5000';
9. Pressure test casing-tubing annulus above packer to 1250 psi to comply with R615-5-5-3.1.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: David L. AllinTitle: Petroleum ConsultantDate: March 18, 1992

(This space for Federal or State office use)

API NO. Approval Date

Approved by..... Title..... Date.....
Conditions of approval, if any:

*See Instructions On Reverse Side

RECEIVED

AUG 12 1992

APPLICATION FOR INJECTION WELL - UIC FORM 1

OPERATOR Arrow Mud c/o David L. Allin
ADDRESS 323 Center St., Suite 208
Salt Lake City, UT 84103-1628

DIVISION OF
OIL, GAS & MINING

Page Exxon Ute Tribal 43-047-30774
Well name and number: 1-14B1E (To be changed upon approval to Ute SWD 1-14B1E)
Field or Unit name: Bluebell East Landowner (surf. & min.) Ute Tribal
Lease no. Ute Tribal
Well location: QQ NWNE section 14 township 2 S range 1 E county Uintah

Is this application for expansion of an existing project? . . Yes ☐ No ☒

Will the proposed well be used for: Enhanced Recovery? . . Yes ☐ No ☒
Class I Type W & Class II Type D Disposal? Yes ☒ No ☐
Storage? Yes ☐ No ☒

Is this application for a new well to be drilled? Yes ☐ No ☒

If this application is for an existing well,
has a casing test been performed on the well? Yes ☐ No ☒

Date of test: Tests planned in APD
API number: 43-047-30774

Lwr. Uinta Fm. (Evacuation Cr.) & Upr. Parachute Cr. Mbrs. Gr. River
Proposed injection interval: from 5018' to 5263' gross

Proposed maximum injection: rate 10 BPM pressure 1250 psig

Proposed injection zone contains ☐ oil, ☐ gas, and/or ☐ fresh water within 1/2
mile of the well. None of the above (show of gas only)

IMPORTANT: Additional information as required by R615-5-2 should
accompany this form.

List of Attachments: APD, Plat of wells and ownership, DST of proposed injection
zone with fluid analysis, Affidavit certifying notification, Data for R615-5-2

I certify that this report is true and complete to the best of my knowledge.

Name David L. Allin
Title Consultant to Arrow Mud
Phone No. (801) 521-0215

Signature David L. Allin
Date March 18, 1992

(State use only)

Application approved by _____ Title _____
Approval Date _____

Comments:

Ute Distribution Corporation

P.O. Box 696
Roosevelt, Utah 84066
(801) 722-2922

Lena D. Sixkiller, President
Henry Wopsock, Vice-President
Lois LaRose, Secretary
Chris Denver, Treasurer
Pala Nelson, Member

August 24, 1992

RECEIVED

AUG 25 1992

**DIVISION OF
OIL GAS & MINING**

**State of Utah, Division Oil, Gas & Mining
Attention: Ron Firth
355 West North Temple
Suite 350,
Salt Lake City, Utah 84180-1203**

Dear Mr. Firth:

Reference is made to a recent application you received from Arrow Mud c/o David L. Allin to convert the Page Exxon Ute Tribal 1-14B1E to a Disposal well Class II, type D.

*43-047-30774
Sec 14 T25 R 1E*

At present time the Ute Distribution Corporation and the Ute Indian Tribe jointly hold this well under an operating agreement with a company Shougun Oil Inc. Shougun operates this well and the operating agreement has not been cancelled.

Furthermore, the Ute Distribution Corporation owns 27% of the Page Exxon Ute Tribal 1-14B1E well including surface equipment and borehole rights. Therefore, this application should not be approved due to the operating agreement in place at this time. Arrow Mud does not have a lease in this section with the Ute Distribution Corporation.

A letter to the U.S. Environmental Protection Agency concerning these same views has been forwarded for review.

Sincerely,

Lena D. Sixkiller

**Lena D. Sixkiller, President
Ute Distribution Corporation**

Certified Mail #P 381-836-648

**cc: Arrow Mud c/o David L. Allin
U.S. Environmental Protection Agency**



Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

GLH

September 9, 1992

Arrow Mud
c/o David L. Allin
323 Center St., Suite 208
Salt Lake City, Utah 84103-1628

Dear Mr. Allin:

Re: Application for Injection Well, Ute 1-14B1E, Section 14, Township 2 South, Range 1 East, Uintah County, Utah

The Division has received your Application for a Class II Injection Well for the referenced well. It is our understanding that you are also simultaneously pursuing a Class I (hazardous waste) permit.

Since the Ute 1-14B1E well is located on Indian surface and mineral lease and we see no correlative rights issues associated with the application, primary jurisdiction resides with the U.S. Environmental Protection Agency (EPA). It is our recommendation at this time that you first pursue the Class I permit with EPA. The EPA Class I permit requirements are more stringent than those for a Class II permit, and would also allow for injection of oil field wastes. If that permit is denied, then at that time you could request permitting of the well as a Class II Injection well.

Your application to plug back the well cannot be processed since our records currently indicate that the Ute Indian Tribe is the operator of the well. The current operator or designated agent would need to apply to plug back the well.

We will wait to hear from you before taking any further action on your application. If we can be of any further assistance, please contact this office.

Best regards,


Dianne R. Nielson
Director

ldc

cc: Ute Indian Tribe
Bureau of Land Management
Environmental Protection Agency

WUI58

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Uintah and Ouray Agency
Reservation

Business Lease No. 6562
Allotment No(s): Tribal

FEE: Waived

MODIFICATION

The undersigned lessee and lessor(s) mutually agree that the above numbered lease covering lands described as: Within E1/2NW1/4NE1/4, E1/2W1/2NW1/4NE1/4,
Section 14, Township 2 South, Range 1 East, UINTA MERIDIAN, UTAH.

 containing 30.00 acres, more or less, be modified to provide:
Bonding in the amount of \$15,000.00 and to delete Item 3.(b) in its entirety
under Term of Agreement.

This modification does not change any of the terms, conditions or stipulations of the lease, except as specifically set forth herein.

LESSEE

Frank Arrowchis

Frank Arrowchis

Arrow Mud

LESSORS

THE UTE INDIAN TRIBE

BY: Luke J. Duncan
Chairman, Uintah and Ouray
Tribal Business Committee

Chris Bigler

SURETY

Approved in accordance with existing rules, regulations and delegated authorities from the Secretary of the Interior.

6-25-92
Date

Superintendent

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

LEASE

FEE: \$250.00

Allotment No. Tribal

Lease No. 6562

Contract No.

Uintah & Ouray Indian Agency
Fort Duchesne, UT 84026

THIS CONTRACT, made and entered into this 18th day of May, A.D. 1992,
by and between the Indian or Indians named below (the Secretary of the Interior acting for and on behalf of the Indians)
hereinafter called the "lessor," and ARROW MUD

c/o Frank Arrowchis - P.O. Box 127 of

Whiterocks, UT 84085, hereinafter called the "lessee" in accordance with the provisions of existing
law and the regulations (25 CFR 131) which by reference are made a part hereof.

WITNESSETH, That for and in consideration of the rents, covenants, and agreements hereinafter provided, the lessor
hereby lets and leases unto the lessee the land and premises described as follows, to wit:

Within: E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 14, Township 2 South, Range 1 East,
Uintah meridian Utah.

containing 30.00 acres, more or less, for the term of 20 years, beginning on the day

of Approval, 19, to be used only for the following purposes:

Salt Water Disposal Well

The lessee, in consideration of the foregoing, covenants and agrees, as rental for the land and premises, to pay:

TO—

DATE DUE

AMOUNT

UTE INDIAN TRIBE

Refer to Payment Agreement

In the event of the death of any of the owners to whom, under the terms of this lease, rentals are to be paid direct, all
rentals remaining due and payable shall be paid to the official of the Bureau of Indian Affairs having jurisdiction over the
leased premises. This provision is applicable only while the leased premises are in trust or restricted status.

While the leased premises are in trust or restricted status, the Secretary may in his discretion, and upon notice to the
lessee, suspend the direct rental payment provisions of this lease in which event the rentals shall be paid to the official of the
Bureau of Indian Affairs having jurisdiction over the leased premises.

OPTION TO RENEW FOR 10 YEAR PERIOD

This lease is subject to the following provisions:

1. "SECRETARY" as used herein means the Secretary of the Interior or his authorized representative.

2. IMPROVEMENTS.—Unless otherwise provided herein it is understood and agreed that any buildings or other improvements placed upon the said land by the lessee become the property of the lessor upon termination or expiration of this lease.

3. UNLAWFUL CONDUCT.—The lessee agrees that he will not use or cause to be used any part of said premises for any unlawful conduct or purpose.

4. SUBLEASES AND ASSIGNMENTS.—Unless otherwise provided herein, a sublease, assignment or amendment of this lease may be made only with the approval of the Secretary and the written consent of all parties to this lease, including the surety or sureties.

5. INTEREST.—Interest will be assessed based on the average prime rate in effect on the last day of each month, plus (3) percent. Interest assessed pursuant to this provision will become due and payable from the date such rental becomes due and will run until said rental is paid.

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6. RELINQUISHMENT OF SUPERVISION BY THE SECRETARY.—Nothing contained in this lease shall operate to delay or prevent a termination of Federal trust responsibilities with respect to the land by the issuance of a fee patent or otherwise during the term of the lease; however, such termination shall not serve to abrogate the lease. The owners of the land and the lessee and his surety or sureties shall be notified by the Secretary of any such change in the status of the land.

7. RENTAL ADJUSTMENT.—The rental provisions in all leases which are granted for a term of more than five years and which are not based primarily on percentages of income produced by the land shall be subject to review and adjustment by the Secretary at not less than five-year in-

tervals in accordance with the regulations in 25 CFR 131. Such review shall give consideration to the economic conditions at the time, exclusive of improvement or development required by this contract or the contribution value of such improvements.

8. INTEREST OF MEMBER OF CONGRESS.—No Member of, or Delegate to, Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise herefrom, but this provision shall not be construed to extend to this contract if made with a corporation or company for its general benefit.

9. VIOLATIONS OF LEASE.—It is understood and agreed that violations of this lease shall be acted upon in accordance with the regulations in 25 CFR 131.

10. ASSENT NOT WAIVER OF FUTURE BREACH OF COVENANTS.—No assent, express or implied, to any breach of any of the lessee's covenants, shall be deemed to be a waiver of any succeeding breach of any covenants.

11. UPON WHOM BINDING.—It is understood and agreed that the covenants and agreements hereinbefore mentioned shall extend to and be binding upon the heirs, assigns, successors, executors, and administrators of the parties of this lease. While the leased premises are in trust or restricted status, all of the lessee's obligations under this lease, and the obligations of its sureties, are to the United States as well as to the owner of the land.

12. APPROVAL.—It is further understood and agreed between the parties hereto that this lease shall be valid and binding only after approval by the Secretary.

13. ADDITIONS.—Prior to execution of this lease, provision(s) number(s) Term of Agreement

Item I has (have) been added hereto and by reference is (are) made a part hereof.

IN WITNESS WHEREOF, the parties have hereunto set their hands on this

day of _____, 19____.

Witnesses (two to each signature):

P. O. _____

Frank Arrowchis
FRANK ARROWCHIS - ARROW MUD

Lessee.

P. O. _____

Lessee.

UTE INDIAN TRIBE

P. O. _____

BY: *Gay Proulx*
Chairman, Uintah and Ouray
Tribal Business Committee

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

P. O. _____

Lessor.

Approved *my* 17, 1922

[Signature]
Superintendent

Approving Official. *[Signature]*

TERM OF AGREEMENT

1. Term of Agreement. Assuming all payments are promptly made and the lease is not otherwise in breach, Arrow Mud may operate the #1-14BLE for an initial term of twenty (20) years. The lease may be extended for an additional ten (10) years if the parties so elect on Arrow Mud remitting to the Tribe \$10,000.00 in the nineteenth (19th) year of the lease.
2. Equipment. Arrow mud will be permitted to use all equipment on-site at the #1-14BLE without cost, but such equipment shall remain the exclusive property of the Tribe. Arrow Mud shall be solely responsible for repair, upkeep and replacement of the equipment so used, and shall return it to the Tribe in working order at termination or expiration of the lease. Any additional equipment needed by Arrow mud shall be purchased by it and shall remain the property of Arrow Mud.
3. Payments. Other than the renewal payment, the Tribe will not require Arrow Mud to make cash bonus payments under the lease. Arrow Mud shall pay as rentals under the lease the following:
 - a. Pre-Recoupment Payment. Prior to recouping one hundred and twenty-five percent (125%) of its investment to prepare the #1-14BLE as a salt water disposal well, Arrow Mud shall pay to the Tribe monthly -
 - (1) eight cents (\$.08) per barrel for each barrel of water disposed from #1-14BLE until Arrow Mud has received from disposal revenues a gross payment of three hundred twelve thousand and five hundred dollars (\$312,500) and
 - (2) twelve cents (\$.12) per barrel for each barrel of water disposed of in the #1-14BLE thereafter;
 - b. Post-Recoupment Payment. Following recoupment by Arrow Mud of one hundred and twenty-five percent (125%) of its well preparation costs, it shall pay to the Tribe monthly fifty percent (50%) of net well revenues. The net revenue payment shall be accompanied by verification of monthly costs and Arrow Mud shall not be allocated an operating fee for the well. costs for the #1-14BLE exceeding \$10,000.00 in any given month shall not be incurred unless agreed to in writing by the Tribe.

RECEIPTS REQUESTED ON ALL DIRECT PAYMENTS Mail to Bureau of Indian Affairs U&O Agency, Fort Duchesne, UT 84026

4. Bonds, Abandonment and Reclamation. Arrow Mud shall post such bonds as may be required by and operate and reclaim the #1-14BLE in conformance with regulations of the Bureau and other federal agencies having jurisdiction. Arrow Mud shall make such arrangements with the Bureau as may be necessary to meet these requirements.
5. Indemnification and Insurance. Arrow Mud shall indemnify and hold the Tribe harmless from all claims related to the #1-14BLE. In addition, Arrow Mud shall carry such insurance covering well operations and pollution as the Bureau may require.

Date

5/19/92

Signature

Frank Arrowchis

Frank Arrowchis
Arrow Mud

ROUTING AND TRANSMITTAL SLIP

Date

9/22/92

TO: (Name, office symbol, room number,
building, Agency/Post)

Initials

Date

1. BRAD HILL OR GIL HUNT

2. - DOGM -

3.

4.

5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

The business lease issued to Arrow Mud authorizing them to dispose of water into the #1-1481E well. Should take care of the concerns identified in the Division letter dated 9/9/92 over which entity is the operator of the well.

RECEIVED

SEP 23 1992

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions.

DIVISION OF
OIL GAS & MINING

FROM: (Name, org. symbol, Agency/Post)

Room No.—Bldg.

JERRY KENCZKA

Phone No.

(800) 789-1362

5041-102

GPO : 1987 O - 196-409

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:	
1-LCR / GIL	<input checked="" type="checkbox"/>
2-DTS/ST-DORA	<input checked="" type="checkbox"/>
3-VLC	<input checked="" type="checkbox"/>
4-RJF	<input checked="" type="checkbox"/>
5-RWM	<input checked="" type="checkbox"/>
6-ADA	<input checked="" type="checkbox"/>

Attach all documentation received by the division regarding this change.
 Initial each listed item when completed. Write N/A if item is not applicable.

- ☒ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator ☐ Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 5-18-92)

TO (new operator)	<u>ARROW MUD</u>	FROM (former operator)	<u>UTE INDIAN TRIBE</u>
(address)	<u>323 CENTER ST, STE 208</u>	(address)	
	<u>SALT LAKE CITY UT 84103-1628</u>		
	<u>DAVID L. ALLIN</u>		
	phone (<u>801</u>) <u>521-0215</u>		phone ()
	account no. <u>N2350 (10-8-92)</u>		account no. <u>N 0275</u>

Well(s) (attach additional page if needed):

Name: <u>UTE TRI 1-14-BIE/GR-WS</u>	API: <u>43-047-30774</u>	Entity: <u>4521</u>	Sec <u>14</u> Twp <u>2S</u> Rng <u>1E</u>	Lease Type: <u>INDIAN</u>
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____

OPERATOR CHANGE DOCUMENTATION

- 1 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). (Rec'd 9-23-92)
- 2 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). (Rec'd 8-12-92 - APD to convert to SDW)
- 3 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) ____ If yes, show company file number: #099525.
- 4 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below. (Rec'd 9-23-92)
- 5 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (10-8-92)
- 6 6. Cardex file has been updated for each well listed above. (10-8-92)
- 7 7. Well file labels have been updated for each well listed above. (10-8-92)
- 8 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (10-8-92)
- 9 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

1 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ____ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

N/A 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.

N/A 2. A copy of this form has been placed in the new and former operators' bond files.

1 3. The former operator has requested a release of liability from their bond (yes/no) ____.
Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.

N/A 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

1 1. All attachments to this form have been microfilmed. Date: Oct 13 1992.

FILING

1 1. Copies of all attachments to this form have been filed in each well file.

1 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

Ute Distribution Corporation

P.O. Box 696
Roosevelt, Utah 84066
(801) 722-2922

Lena D. Sixkiller, President
Henry Wopsock, Vice-President
Lois LaRose, Secretary
Chris Denver, Treasurer
Pala Nelson, Member

August 24, 1992

RECEIVED

AUG 25 1992

**DIVISION OF
OIL GAS & MINING**

**State of Utah, Division Oil, Gas & Mining
Attention: Ron Firth
355 West North Temple
Suite 350,
Salt Lake City, Utah 84180-1203**

Dear Mr. Firth:

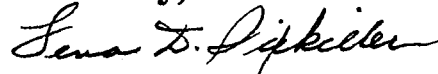
Reference is made to a recent application you received from Arrow Mud c/o David L. Allin to convert the Page Exxon Ute Tribal 1-14B1E to a Disposal well Class II, type D.

At present time the Ute Distribution Corporation and the Ute Indian Tribe jointly hold this well under an operating agreement with a company Shougun Oil Inc. Shougun operates this well and the operating agreement has not been cancelled.

Furthermore, the Ute Distribution Corporation owns 27% of the Page Exxon Ute Tribal 1-14B1E well including surface equipment and borehole rights. Therefore, this application should not be approved due to the operating agreement in place at this time. Arrow Mud does not have a lease in this section with the Ute Distribution Corporation.

A letter to the U.S. Environmental Protection Agency concerning these same views has been forwarded for review.

Sincerely,



**Lena D. Sixkiller, President
Ute Distribution Corporation**

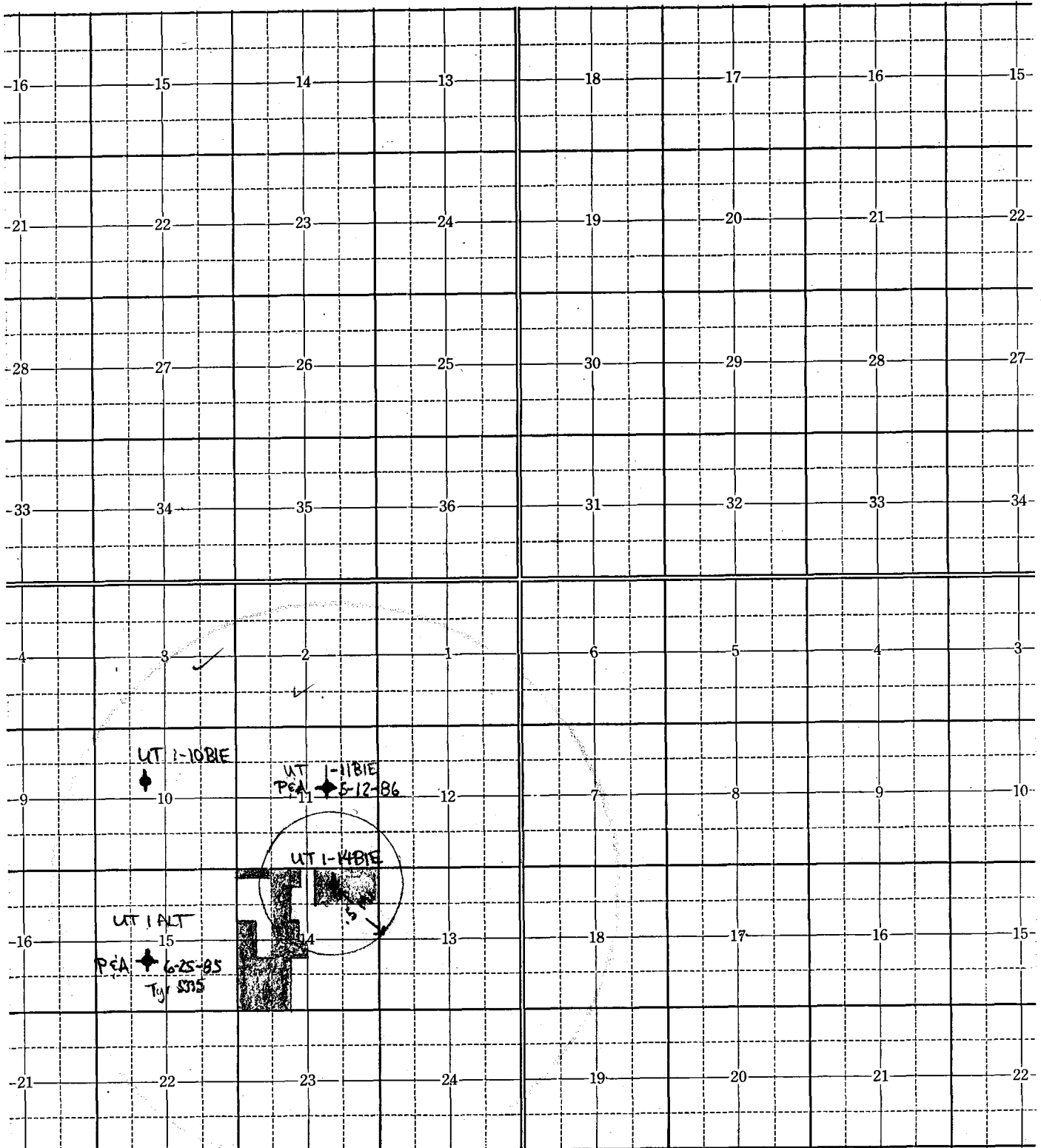
Certified Mail #P 381-836-648

**cc: Arrow Mud c/o David L. Allin
U.S. Environmental Protection Agency**

County UINTAH State UTAH

R 1E

R 2E



T
1
S

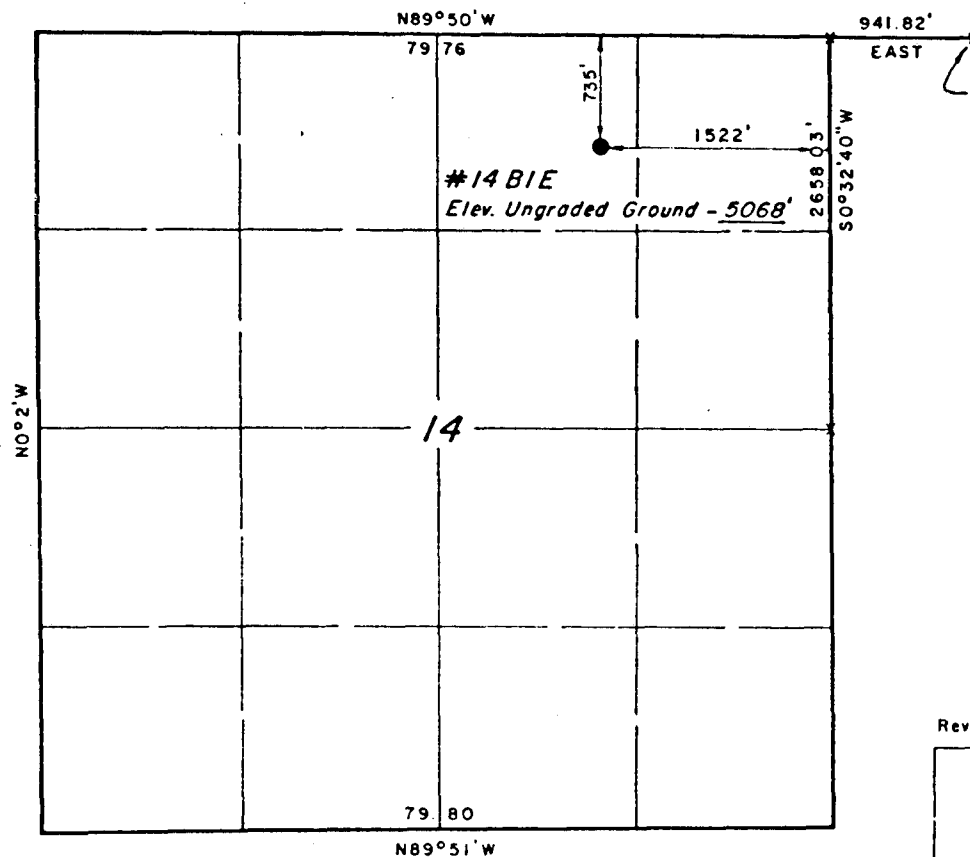
T
2
S

UTE INDIAN TRIBE

T2S, R1E, U.S.B. & M.

PROJECT
PAGE PETROLEUM INC.

Well location #14 B1E located as
shown in the NW 1/4 NE 1/4 Section 14,
T2S, R1E, U.S.B. & M., Uintah County, Utah.



SE Corner of Lot 2, Section 12,
T2S, R1E, U.S.B. & M., Uintah
County, Utah.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE MAP WAS PREPARED FROM
FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY
SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

James Stewart
REGISTERED LAND SURVEYOR
REGISTRATION NO 3154
STATE OF UTAH

Revised 7/30/80

UINTAH ENGINEERING & LAND SURVEYING
P.O. BOX Q - 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE	1" = 1000'	DATE	6/23/80
PARTY	MS KH DF AW	REFERENCES	GLO. Plat
WEATHER	Fair	FILE	PAGE PETROLEUM

X = Section Corners Located

FIGURE G-2

GR, SP, DIL-SFL

DST 4998'-5045' 1 hr, rec
 45' WCM, 755' GCW, FFP
 375#, FSP 2151#, FHP 2425#
 Sample 10,000 ppm Chlor.,
 .5 Ohm-M @ 52° (water)

PROPOSED PERFS: 5018'-
 5044'

Uinta Formation

Evacuation Creek Mbr.
 Green River Formation
 (Uinta Formation)

Parachute Creek Mbr.
 Green River Formation

5120'-
 5140'

5155'-
 5160'

5194'-
 5226'

5255'-
 5263'

CIBP @ 5135' w/2 sks
 (Proposed)

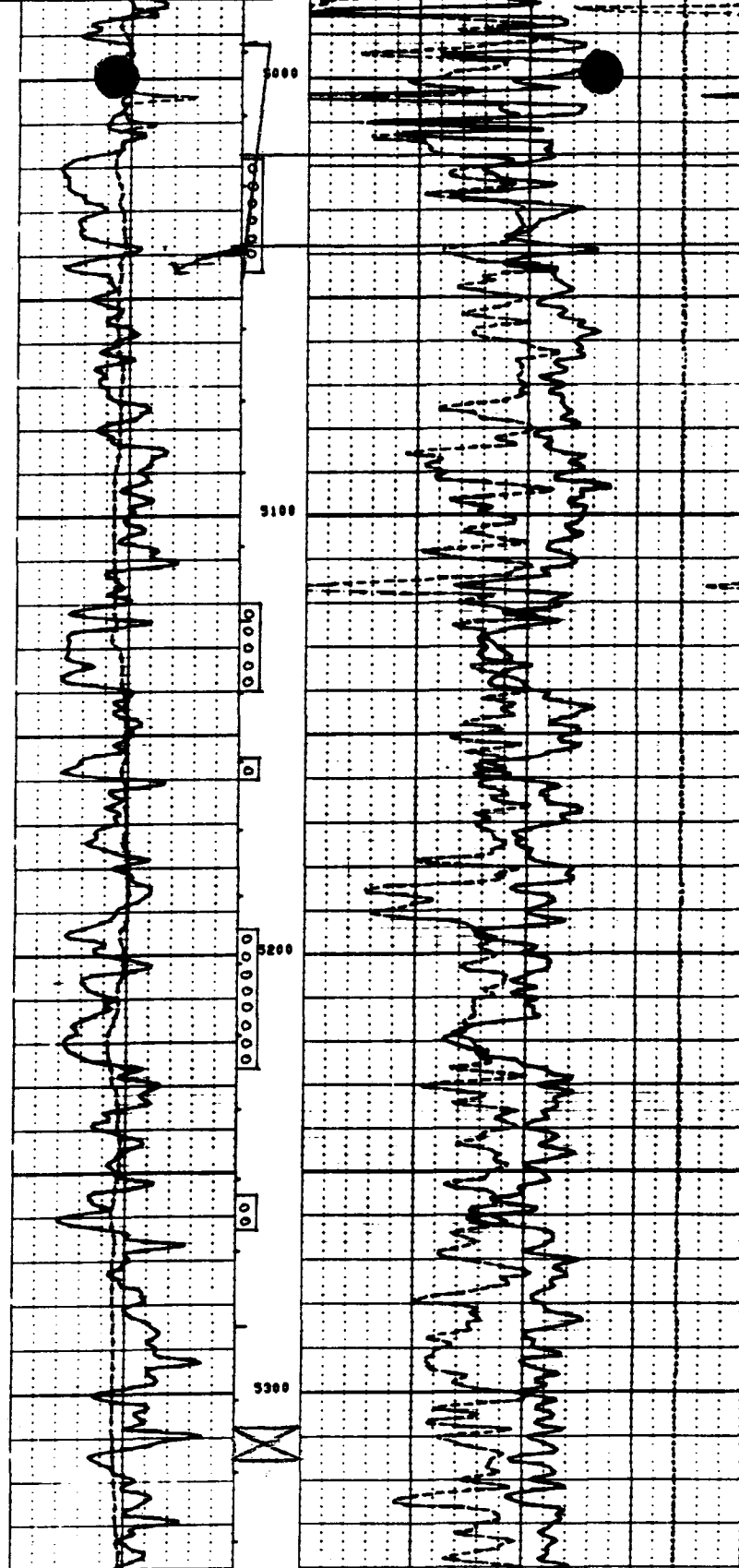
SP (REV.)			JLR (OHM)		
-100.0	0.0	0.0000	10000	0.0	0.0000
SR (GPI)			SLM (OHM)		
100.0	300.0	0.0000	10000	0.0000	0.0000
SR (GPI)			SFL (OHM)		
0.0	100.0	0.0000	10000	0.0000	0.0000
PARAMETERS					
NAME	UNIT	VALUE	NAME	UNIT	VALUE
NC	CAL	2.300	PSMR	G/C3	2.300
RSEC	G/C3	2.600	FB	G/C3	1.000
BSEC	MM/M	5.710	BNF	MATE	1.000
RSEC	MM/M	5.630	SDR	OHM	1.000
BO	0.0	0.000	BHS	OPEN	0.000
BS	INCH	9.875	PPH	PHIX	0.000
RATR	SAND	0.000			

DST 4998'-5045' 1 hr,
 rec 45' WCM, 755' GCW,
 FFP 375#, FSP 2151#,
 FHP 2425#, Sample:
 water with 10,000 ppm
 Chlor., .5 Ohm-M @ 52°
 PROPOSED PERFS: 5018'-
 5044'

FIGURE G-1
 CAL, GR, CNL, FDC

Uinta Formation
 Evacuation Creek Mbr.
 Green River Fm.
 (Uinta Formation)
 Parachute Creek Mbr.
 Green River Formation

5120'-
 5140'
 5155'-
 5160'
 5194'-
 5226'
 5255'-
 5263'



CIBP @ 5315' w/2 sks
 (Proposed)

6.000 10.00 100.0 1.0			10.00 00.00 000.0 100.0			0.000 0.000 0.000 0.000			0.000 0.000 0.000 0.000		
6.000 10.00 100.0 1.0			10.00 00.00 000.0 100.0			0.000 0.000 0.000 0.000			0.000 0.000 0.000 0.000		
6.000 10.00 100.0 1.0			10.00 00.00 000.0 100.0			0.000 0.000 0.000 0.000			0.000 0.000 0.000 0.000		
6.000 10.00 100.0 1.0			10.00 00.00 000.0 100.0			0.000 0.000 0.000 0.000			0.000 0.000 0.000 0.000		
6.000 10.00 100.0 1.0			10.00 00.00 000.0 100.0			0.000 0.000 0.000 0.000			0.000 0.000 0.000 0.000		

PARAMETERS								
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
NC			PSDR		2.200	DS	INCH	6.700
NCEN	G/C3	2.710	FD	G/C3	1.000	WATR		LINE
BSEC	HR/H	3.600	SDP		DATE			
BSEC	HR/H	3.600	SDR	DOWN	1.000	PPH1		PH1X
DS		0.0	SDS	OPEN				

----- WELL IDENTIFICATION -----

COMPANY:	PAGE PETROLEUM, INC.	CUSTOMER:	SAME
	P.O. BOX 1656		
	ROOSEVELT, UTAH 84066		
WELL:	PAGE-EXXON-UTE #1-14-B1E	LOCATION:	SEC. 14, T2S R1E
TEST INTERVAL:	4992' TO 5045'	FIELD:	WILD CAT
TEST NO:	1	TEST DATE:	10-27-80
COUNTY:	UINTAH	STATE:	UTAH
TECHNICIAN:	RICHARDS (VERNAL)	TEST APPROVED BY:	MR. C.R. WHITE

----- EQUIPMENT AND HOLE DATA -----

TEST TYPE:	M.F.E. OPEN HOLE	DRILL PIPE LENGTH:	4380	FT.
ELEVATION:	5050	DRILL PIPE I.D.:	3.80	IN.
TOTAL DEPTH:	5045	DRILL COLLAR LENGTH:	565	FT.
MAIN HOLE/CASING SIZE:	9 5/8	DRILL COLLAR I.D.:	2.25	IN.
RAT HOLE/LINER SIZE:	-	PACKER DEPTHS:	4988 & 4992	FT.
FORMATION TESTED:	UINTAH		&	FT.
NET PROD. INTERVAL:	11	FT. DEPTHS REF. TO:	KELLY BUSHING	
POROSITY:	6	%		

----- TEST TOOL CHAMBER DATA -----

SAMPLER PRESSURE:	20	PSIG
RECOVERED OIL GRAVITY:	API @	DEG. F.
RECOVERY GOR:		FTS/BDL.

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESIST. (OHM-IN)	MEAS. TEMP. (DEG F.)	CHLOR. (PPM)
GAS:	- FT.3			
OIL:	- CC			
WATER:	2400 CC	.5	52	10000
MUD:	- CC			
FILTRATE:				
TOTAL LIQUID:	2400 CC			

----- MUD DATA -----

TYPE:	LOW SOLIDS SEMI DISPER
WEIGHT:	9.2 LB/GAL.
VISCOSITY:	45 SEC.
WATER LOSS:	13.6 CC
FLUID	RESIST (OHM-IN) TEMP (DEG F) CHLOR (PPM)
MUD:	4 46
FILTRATE:	3.6 46 1000

----- REMARKS -----

NO. OF REPORTS REQUESTED: 10 (5X'S)

FIELD REPORT NO. 253000

----- SURFACE INFORMATION -----

DESCRIPTION(RATE OF FLOW)	TIME	PRESSURE PSIG	SURFACE CHOKE
SET PACKER	1438	-	1/4"
OPENED TOOL	1442	-	"
BLOW, 1/4" IN WATER			"
CLOSED FOR INITIAL SHUT-IN	1444	2 OZ	"
FINISHED SHUT-IN	1453	5.75 OZ	"
RE-OPENED TOOL	1523	-	"
BLOW, 1/4" IN WATER	1524	-	"
	1533	4 OZ	"
	1544	7 OZ	"
	1554	8.5 OZ	"
	1604	8 OZ	"
CLOSED FOR FINAL SHUT-IN	1614	7.75 OZ	"
FINISHED SHUT-IN	1624	6.5 OZ	"
PULLED PACKER LOOSE	1724	-	"
	1727	-	-

CUSHION TYPE: -	- FT	- PSIG	11/16 IN. BOTTOM CHOKE
-----------------	------	--------	------------------------

----- RECOVERY INFORMATION -----

RECOVERY	FEET	BARRELS	%OIL	%WATER	%OTHERS	API GRAV.	DEG.	RESIST	DEG.	CHL PPM
WATER CUT MUD	45	.64						1.2	45	2400
GAS CUT WATER	755	5.47								
TOP SAMPLE								.38	48	11000
BOTTOM SAMPLE								.5	50	10000

FIELD REPORT NO. 25380D

PRESSURE LOG

FIELD REPORT NO. 253800

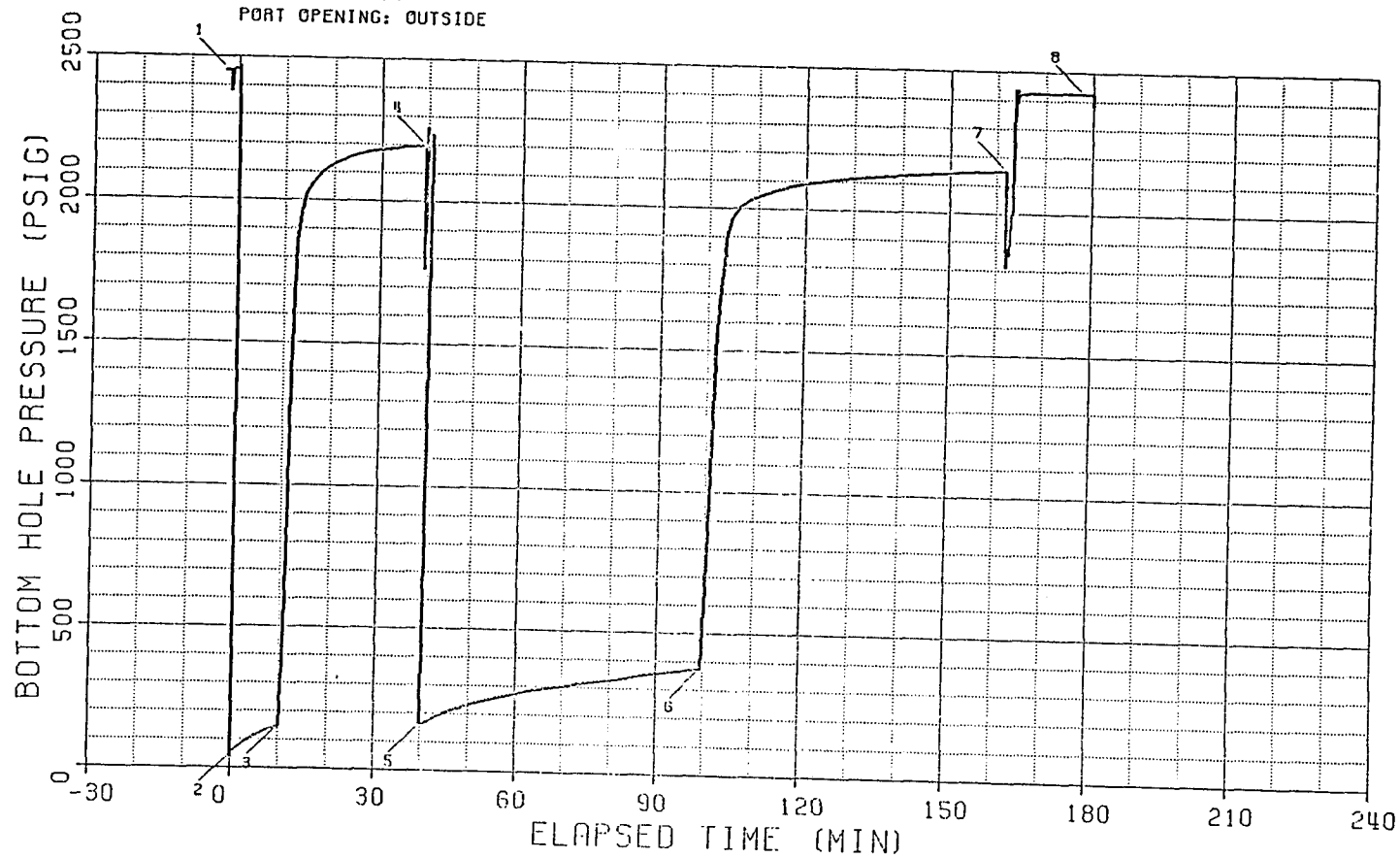
INSTRUMENT:

NUMBER: J-1238

CAPACITY: 4700 PSI

DEPTH: 4998 FT

PORT OPENING: OUTSIDE



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-1238
PORT OPENING: OUTSIDE

CAPACITY (PSI): 4769
BOTTOM HOLE TEMP (F): 114

DEPTH (FT): 4998
PAGE 1

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	2454	-2.3
START FLOW	2	52	0.0
END FLOW & START SHUT-IN	3	148	9.9
END SHUT-IN	4	2193	39.4
START FLOW	5	165	39.8
END FLOW & START SHUT-IN	6	375	99.3
END SHUT-IN	7	2151	161.9
HYDROSTATIC MUD	8	2425	178.9

* SUMMARY OF FLOW PERIODS *

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	9.9	9.9	52	148
2	39.8	99.3	59.5	165	375

* SUMMARY OF SHUT-IN PERIODS *

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	9.9	39.4	29.4	148	2193	148	9.9
2	99.3	161.9	62.6	375	2151	375	69.4

FIELD REPORT NO. 253800
INSTRUMENT NO. J-1238

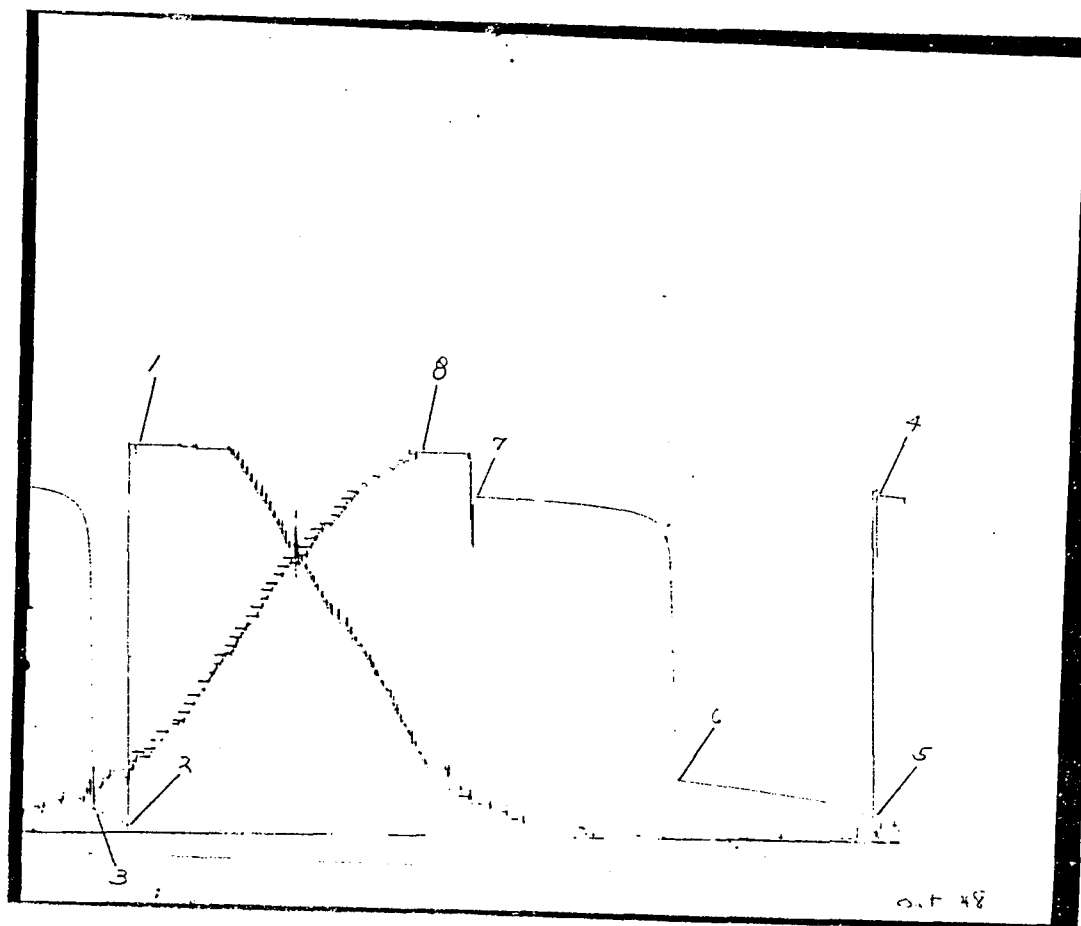
FIELD REPORT NO.: 25380 D

CAPACITY: 4,700#

INSTRUMENT NO.: J-1238

NUMBER OF REPORTS: 10-

JOHNSTON
Schlumberger



FIELD REPORT NO. 25380D
INSTRUMENT NO. J-1238

TEST PHASE : FLOW PERIOD # 1

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
0.0	0.0	52
5.0	5.0	112
9.9	9.9	148

TEST PHASE : SHUT-IN PERIOD # 1

1. FINAL FLOW PRESSURE ["P"] = 148 PSIG
2. PRODUCING TIME ["T"] = 9.9 MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P"] (PSIG)	LOG [(T + DT)/DT] P	DELTA PRESSURE [P - P] WS WF
9.9	0.0	148		0
10.9	1.0	699	1.038	550
11.9	2.0	1052	0.775	1404
12.9	3.0	1099	0.634	1751
13.9	4.0	1096	0.542	1836
14.9	5.0	2036	0.475	1888
15.9	6.0	2035	0.424	1917
16.9	7.0	2035	0.383	1937
17.9	8.0	2174	0.350	1956
18.9	9.0	2116	0.323	1968
19.9	10.0	2128	0.299	1980
21.9	12.0	2144	0.262	1996
23.9	14.0	2153	0.233	2010
25.9	16.0	2168	0.210	2020
27.9	18.0	2176	0.191	2028
29.9	20.0	2181	0.175	2033
31.9	22.0	2186	0.162	2038
33.9	24.0	2191	0.150	2042
35.9	26.0	2194	0.140	2046
37.9	28.0	2196	0.132	2048
39.4	29.4	2198	0.126	2050

FIELD REPORT NO. 253800
INSTRUMENT NO. J-1238

TEST PHASE : FLOW PERIOD # 2

ELAPSED TIME (MIN)	DELTA TIME (MIN)	FLOWING PRESSURE (PSIG)
*****	*****	*****
39.8	0.0	165
44.8	5.0	198
49.8	10.0	231
54.8	15.0	254
59.8	20.0	273
64.8	25.0	289
69.8	30.0	302
74.8	35.0	315
79.8	40.0	329
84.8	45.0	342
89.8	50.0	355
94.8	55.0	366
99.3	59.5	375

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P" ^{WF} "1" = 375 PSIG
2. PRODUCING TIME ["T" ^P "1" = 69.4 MIN

ELAPSED TIME (MIN)	DELTA TIME ["DT"] (MIN)	SHUT-IN PRESSURE ["P" ^{WS} "1"] (PSIG)	LOG [(T +DT)/DT] P	DELTA PRESSURE [P - P ¹] WS WF
*****	*****	*****	*****	*****
99.3	0.0	375		0
100.3	1.0	368	1.848	413
101.3	2.0	367	1.553	932
102.3	3.0	366	1.383	1290
103.3	4.0	364	1.264	1469
104.3	5.0	363	1.173	1567
105.3	6.0	361	1.099	1605
106.3	7.0	359	1.038	1628
107.3	8.0	357	0.985	1641
108.3	9.0	355	0.940	1653
109.3	10.0	353	0.900	1663
111.3	12.0	351	0.832	1675
113.3	14.0	348	0.775	1688
115.3	16.0	345	0.727	1698
117.3	18.0	342	0.686	1706
119.3	20.0	339	0.650	1714
121.3	22.0	335	0.619	1720
123.3	24.0	330	0.590	1725
125.3	26.0	326	0.565	1730
127.3	28.0	321	0.542	1734
129.3	30.0	315	0.520	1738

FIELD REPORT NO. 25300D
INSTRUMENT NO. J-1238

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P ""] = 375 PSIG
2. PRODUCING TIME ["T ""] = ^{WF} 69.4 MIN
P

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P ""] (PSIG) *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE EP - P VS WF *****
134.3	35.0	2121	0.475	1746
139.3	40.0	2127	0.437	1752
144.3	45.0	2133	0.405	1758
149.3	50.0	2138	0.378	1764
154.3	55.0	2144	0.355	1769
159.3	60.0	2149	0.334	1773
161.9	62.6	2151	0.324	1776

AFFIDAVIT CERTIFYING NOTIFICATION

I certify that a copy of the Application for Injection Well- UIC Form 1 has been provided to all operators, owners, and surface owners within a one-half mile radius of the proposed injection well, Page Exxon Ute Tribal 1-14B1E (Ute SWD 1-14B1E) NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 14, T 2 S, R 1 E, USM, Uintah County, Utah. The attached list is believed to be accurate and complete for notification purposes. Notifications were mailed by first class U. S. Mail on the 12 th day of August, 1992.

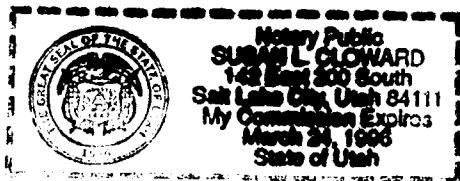



David L. Allin
Consultant (Agent) to Arrow Mud

STATE OF UTAH]
] ss.
COUNTY OF SALT LAKE]

BEFORE ME, the undersigned, a Notary Public, in and for said County and State, on this 12 th day of August, 1992, personally appeared David L. Allin, to me known to be the identical person described in and who executed the within and foregoing instrument of writing and acknowledged to me that he duly executed the same as his free and voluntary act and deed for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.




Notary Public
Residing in Salt Lake City

Steve Winn
Box 124
Duchesne, UT 84026

Francis J. Lundberg
Anita K. Paxton
Box 10
Fort Duchesne, UT 84026

Ella Allen
Box 206
Vernal, UT 84078

Ute Indian Tribe
Box 190
Fort Duchesne, UT 84026

Nicholas Oprandy
Christiana F. Oprandy
Star Rt 1, Box 10
Fort Duchesne, UT 84026

Marjorie E. Schneiderheinze
Carl A. Schneiderheinze
1298 West Victory Way
Craig, CO 81625

Mentora Grumbo
Star Rt 1, Box 10
Fort Duchesne, UT 84026

Gloria A. Hughes
1250 E 2500 S
Vernal, UT 84078

Nicholas J. Meagher, Jr
Box 122
Vernal, UT 84078-0122

Steven L. Richens
4459 E Vernal Hgwy 40
Vernal, UT 84078

Bureau of Indian Affairs
Box 130
Fort Duchesne, UT 84026

Verl Haslem
Leah Haslem
Star Route
Neola, UT 84053

Stacy R. Reed
Elsie M. Reed
Box 126
Neola, UT 84053

Don E. Reed
Sonja Reed
762 Shoshone Ave
Lander, WY 82520

Connie M. Denver
Roselyn Denver
Tu Su Lane
Rt 1, T19
Bishop, CA 93514

Marvin Hart
Janice Hart
791 Vance Drive
Lander, WY 82520

Evelyn F. Covington
1787K 6/10 Road
Fruita, CO 81521

Eva H. Harrison
Box 336
Roosevelt, UT 84066

Lloyd B. Hallett, Jr.
Mary J. Hallett
Rt 1, Box 107

Louise Melcher
Lawrence L. Melcher
2428 Gardner Drive
St Louis, MO 63136

Lena D. & Reuben Sixkiller
c/o Jack Sixkiller
White Rocks Road
Fort Duchesne, UT 84026

Julianne Hancock
General Delivery
Thermopolis, WY 82443

Verna Hoopes
James W. Hoopes
General Delivery
Neola, UT 84053

Theresa Denver
P.O. Box 42
Pala, CA 90259-0042

Pauline D. Freeman
Robert Freeman
P.O. Box 23
Pala, CA 90259-0023

Ellis Denver
Agness Denver
Box 415
Fort Duchesne, UT 84026

Ada Padilla
543 Cascade
Lander, WY 82520

Alvin R. Denver
Naomi Denver
Box
Roosevelt, UT 84066

Data Required by R615-5-2
To Accompany UIC Form 1
December 18, 1991

R615-5-2 Required information for Class II Injection Wells Specific to Ute Tribal 1-14B1E Proposed to be Converted to a Salt Water Disposal Well

1. The attached APD outlines a plan for completion of the 1-14B1E that will equip it in a manner that will prevent pollution and damage to any USDW, or other resources and will confine injected fluids to the interval applied for.

2. This application is submitted with a properly completed UIC Form 1.

2.1. The attached plat shows the location of the proposed injection well and depicts that there are no abandoned or active wells within a one-half mile radius of same, and it further depicts the configuration of the surface ownership and mineral operator of the only producible lease/minerals which is the Ute Indian Tribe. The remainder of subject section is unleased as of 9-91.

2.2. Copies of open hole logs are on file with the division. Excerpts attach.

2.3. A CBL was not run above a depth of 7000' in the 1-14B1E, however, a copy of a new log to be run upon approval of the APD over the proposed injection zones will be submitted to the division for inclusion with the file.

2.4. Please refer to copies of logs currently on file with the division as they have been reviewed and appear to be complete and in good order.

2.5. The existing casing in the well is 7 5/8", 26.4#, N-80, LT&C, 8rd cemented back to the surface. As per the attached APD, the cement will be logged, any flaws mitigated, and pressure tested twice to the maximum injection pressure anticipated which is 1250 psi.

2.6. The type of fluid to be injected is produced water from oil wells completed in the Wasatch and Green River formations in the Greater Altamont-Bluebell field area. According to State of Utah DNR Technical Publication No. 92, the water produced from Wasatch and Green River oil wells contains concentrations of dissolved solids ranging from 10,000 mg/L to a maximum of 300,000 mg/L. The estimated amount of water to be injected daily is a minimum of 2,000 BPD to a maximum of 8,000 BPD, and hazardous wastes (used motor oil, etc.) 5 to 20 BPD.

2.7. As mentioned above, the fluid to be injected will be variable, but will normally be light to heavy sodium chloride brine. According to the results of a DST of the proposed injection zone the Gr. River Fm. at subject location at the top of the zone contains water with 10,000 mg/L chloride in solution. See the attached DST report of October 27, 1980. Since vertical fracturing allows communication of fluids from the Wasatch and Green River to the Uinta formation, the fluids are not only compatible but of the same aquifer.

2.8. The average, proposed injection pressure is 600 psi, and the maximum anticipated pressure is 1250 psi.

2.9. The attached DST of the proposed injection zone indicates the final hydrostatic mud pressure was 2425 psi. The maximum proposed injection pressure is 1250 psi which is approximately one-half (51%) of hydrostatic pressure. This pressure is a small fraction of lithostatic pressure at this depth and is certainly not high enough to initiate fractures through the overlying siltstones. The injection pressures would need to exceed 4800 psi to initiate fractures.

2.10. State of Utah DNR Technical Publication No. 92 indicates on Plate 1 that the proposed injection well is located on the south flank of a "dome" of highly saline water centered three miles north of Fort Duchesne on U.S. Highway 40. The brines have invaded base of Uinta Fm at the proposed injection well and begins at a depth of approximately 4950' from the surface. Structurally, the site is on the flank of an anticlinal trend which extends eastward under the Greater Red Wash oil field. At the proposed injection site, the Uinta formation is comprised of approximately 4,000' of calcareous shale with some limestone, claystone, siltstone and the sandstone sequence identified for salt water injection is capped by that Uinta shale. This sandstone is of fluvial

origin and grades laterally to the west into thinner bedded calcareous lake deposits. The Parachute Cr. Mbr. Gr. River Fm. shales confine injection sands.

2.11. There are no known wells within a one-half mile radius of this proposed injection well. It should be noted that old oil wells in sections 11 and 15 were cased through the proposed injection zone and plugged with cement during 1986 and 1985 respectively.

2.12. The certification of mailing of copies of this application (UIC Form 1) to all operators, owners, and surface owners within a one-half mile radius is attached. See Affidavit Certifying Notification.

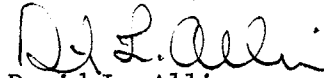
2.13. I am prepared to deliver any other information that the board or division may require.

3. Subject proposed disposal well is not within a recovery project area.

4. The proposed injection interval cannot be classified as an USDW.

5. Compliance with the provisions of R615-3-1, R615-3-4, R615-3-24, R615-3-32, R615-8-1 and R615-10 will be attained.

Arrow Mud



David L. Allin
Petroleum Consultant

Dated this Eighteenth Day of March, 1992

Form 4 UIC	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT APPLICATION <i>(Collected under the authority of the Safe Drinking Water Act, Sections 1421, 1422, 40 CFR 144)</i>	I. EPA ID NUMBER <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>																																		
READ ATTACHED INSTRUCTIONS BEFORE STARTING FOR OFFICIAL USE ONLY																																				
Application approved mo day year	Date Received mo day year	Permit/Well Number Page Exxon Ute Tribal 1-14B1E	Comments Post conversion name to be Ute SWD 1-14B1E																																	
II. FACILITY NAME AND ADDRESS Facility Name Ute Salt Water Disposal-Greater Altamont Field Street Address c/o David L. Allin 323 Center St., Suite 208 City Salt Lake City		III. OWNER/OPERATOR AND ADDRESS Owner/Operator Name Arrow Mud Street Address P. O. Box 127 City Whiterocks State UT ZIP Code 84085																																		
IV. OWNERSHIP STATUS (Mark 'x') <input type="checkbox"/> A. Federal <input type="checkbox"/> B. State <input type="checkbox"/> C. Private <input type="checkbox"/> D. Public <input checked="" type="checkbox"/> E. Other (Explain) Indian Tribe		V. SIC CODES 1311																																		
VI. WELL STATUS (Mark 'x') <input type="checkbox"/> A. Operating <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;"> Date Started mo day year </div> <div> <input checked="" type="checkbox"/> B. Modification/Conversion <input type="checkbox"/> C. Proposed See USDOJ/BLM Sundry Notice copy (Form 3160-5) attached. </div> </div>																																				
VII. TYPE OF PERMIT REQUESTED (Mark 'x' and specify if required) <input checked="" type="checkbox"/> A. Individual <input type="checkbox"/> B. Area Number of Existing wells: One Number of Proposed wells: Name(s) of field(s) or project(s): Bluebell East																																				
VIII. CLASS AND TYPE OF WELL (see reverse) <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"> A. Class(es) (enter code(s)) Class I Class II </td> <td style="width:15%;"> B. Type(s) (enter code(s)) Type W Type D </td> <td style="width:40%;"> C. If class is "other" or type is code 'x,' explain </td> <td style="width:30%;"> D. Number of wells per type (if area permit) </td> </tr> </table>				A. Class(es) (enter code(s)) Class I Class II	B. Type(s) (enter code(s)) Type W Type D	C. If class is "other" or type is code 'x,' explain	D. Number of wells per type (if area permit)																													
A. Class(es) (enter code(s)) Class I Class II	B. Type(s) (enter code(s)) Type W Type D	C. If class is "other" or type is code 'x,' explain	D. Number of wells per type (if area permit)																																	
IX. LOCATION OF WELL(S) OR APPROXIMATE CENTER OF FIELD OR PROJECT <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">C</td> <td style="width:10%;">A. Latitude</td> <td style="width:10%;">B. Longitude</td> <td colspan="4">Township and Range</td> <td style="width:10%;">Feet from</td> <td style="width:10%;">Line</td> <td style="width:10%;">Feet from</td> <td style="width:10%;">Line</td> </tr> <tr> <td></td> <td>Deg Min Sec</td> <td>Deg Min Sec</td> <td>Twsp Range Sec 1/4 Sec</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>I</td> <td></td> <td></td> <td>2S 1E 14 NE</td> <td>1522</td> <td>E</td> <td>735</td> <td>N</td> <td></td> <td></td> <td></td> </tr> </table>			C	A. Latitude	B. Longitude	Township and Range				Feet from	Line	Feet from	Line		Deg Min Sec	Deg Min Sec	Twsp Range Sec 1/4 Sec								I			2S 1E 14 NE	1522	E	735	N				X. INDIAN LANDS (Mark 'x') <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	A. Latitude	B. Longitude	Township and Range				Feet from	Line	Feet from	Line																										
	Deg Min Sec	Deg Min Sec	Twsp Range Sec 1/4 Sec																																	
I			2S 1E 14 NE	1522	E	735	N																													
XI. ATTACHMENTS (Complete the following questions on a separate sheet(s) and number accordingly; see instructions) FOR CLASSES I, II, III (and other classes) complete and submit on separate sheet(s) Attachments A — U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application: Attachments A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, U, BLM Sundry Notice																																				
XII. CERTIFICATION I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)																																				
A. Name and Title (Type or Print) Frank Arrowchis, Proprietor			B. Phone No. (Area Code and No.) 801-353-4378																																	
C. Signature 			D. Date Signed March 10-92																																	

Well Class and Type Codes

Class I	Wells used to inject waste below the deepest underground source of drinking water.
Type "I"	Nonhazardous industrial disposal well
"M"	Nonhazardous municipal disposal well
"W"	Hazardous waste disposal well injecting below USDWs
"X"	Other Class I wells (not included in Type "I," "M," or "W")
Class II	Oil and gas production and storage related injection wells.
Type "D"	Produced fluid disposal well
"R"	Enhanced recovery well
"H"	Hydrocarbon storage well (excluding natural gas)
"X"	Other Class II wells (not included in Type "D," "R," or "H")
Class III	Special process injection wells.
Type "G"	Solution mining well
"S"	Sulfur mining well by Frasch process
"U"	Uranium mining well (excluding solution mining of conventional mines)
"X"	Other Class III wells (not included in Type "G," "S," or "U")
Other Classes	Wells not included in classes above.
	Class V wells which may be permitted under §144.12
	Wells not currently classified as Class I, II, III, or V.

Attachments to Permit Application

Class	Attachments
I new well	A, B, C, D, F, H — S, U
existing	A, B, C, D, F, H — U
II new well	A, B, C, E, G, H, M, Q, R; optional — I, J, K, O, P, U
existing	A, E, G, H, M, Q, R — U; optional — J, K, O, P, Q
III new well	A, B, C, D, F, H, I, J, K, M — S, U
existing	A, B, C, D, F, H, J, K, M — U
Other Classes	To be specified by the permitting authority

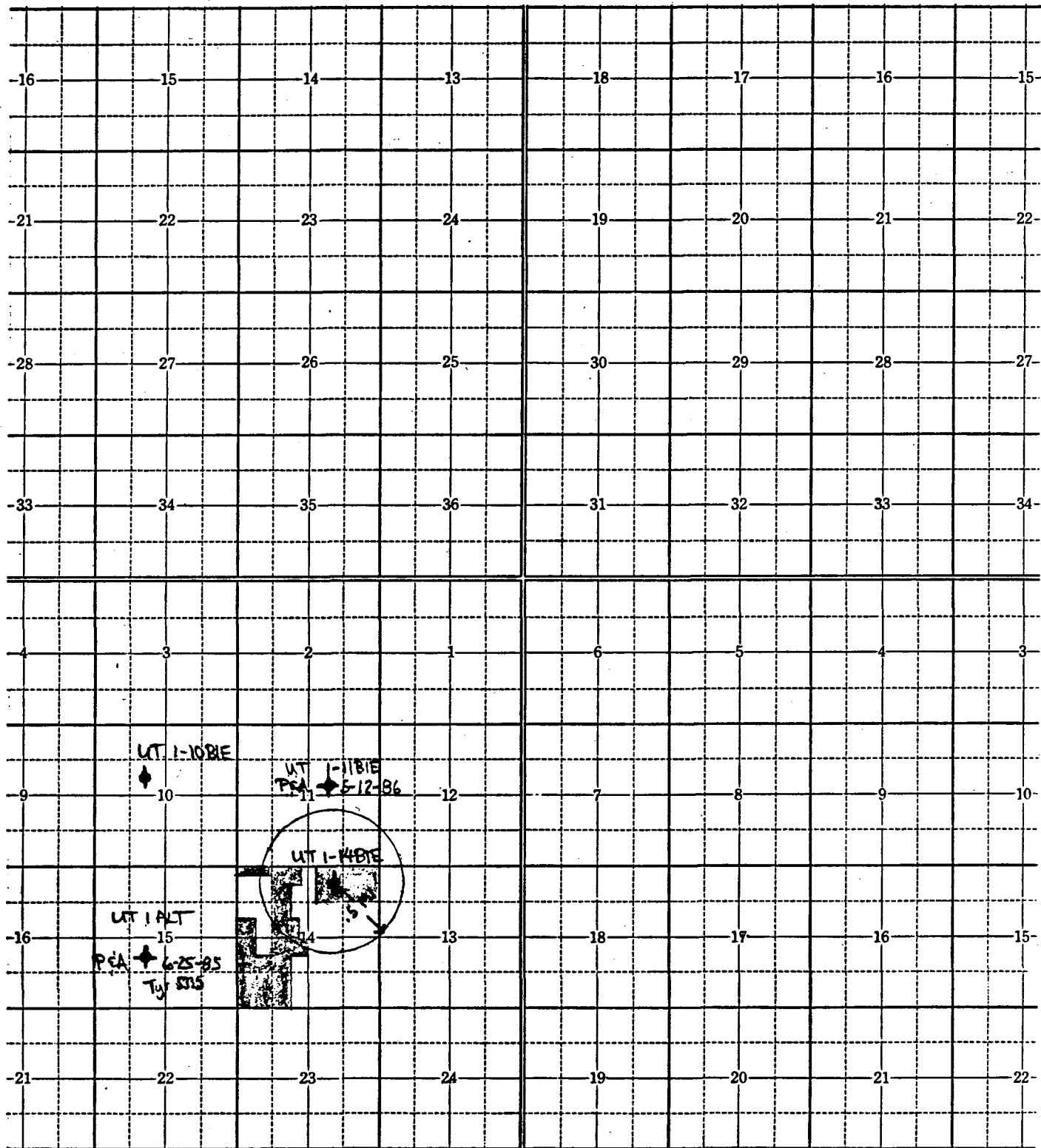
ATTACHMENT A
FORM 4 UIC

The area of review selected was a fixed radius of $\frac{1}{2}$ mile to comply with the Utah Oil and Gas Conservation General Rules under R615-5.

County UINTAH State UTAH

R 1E

R 2E



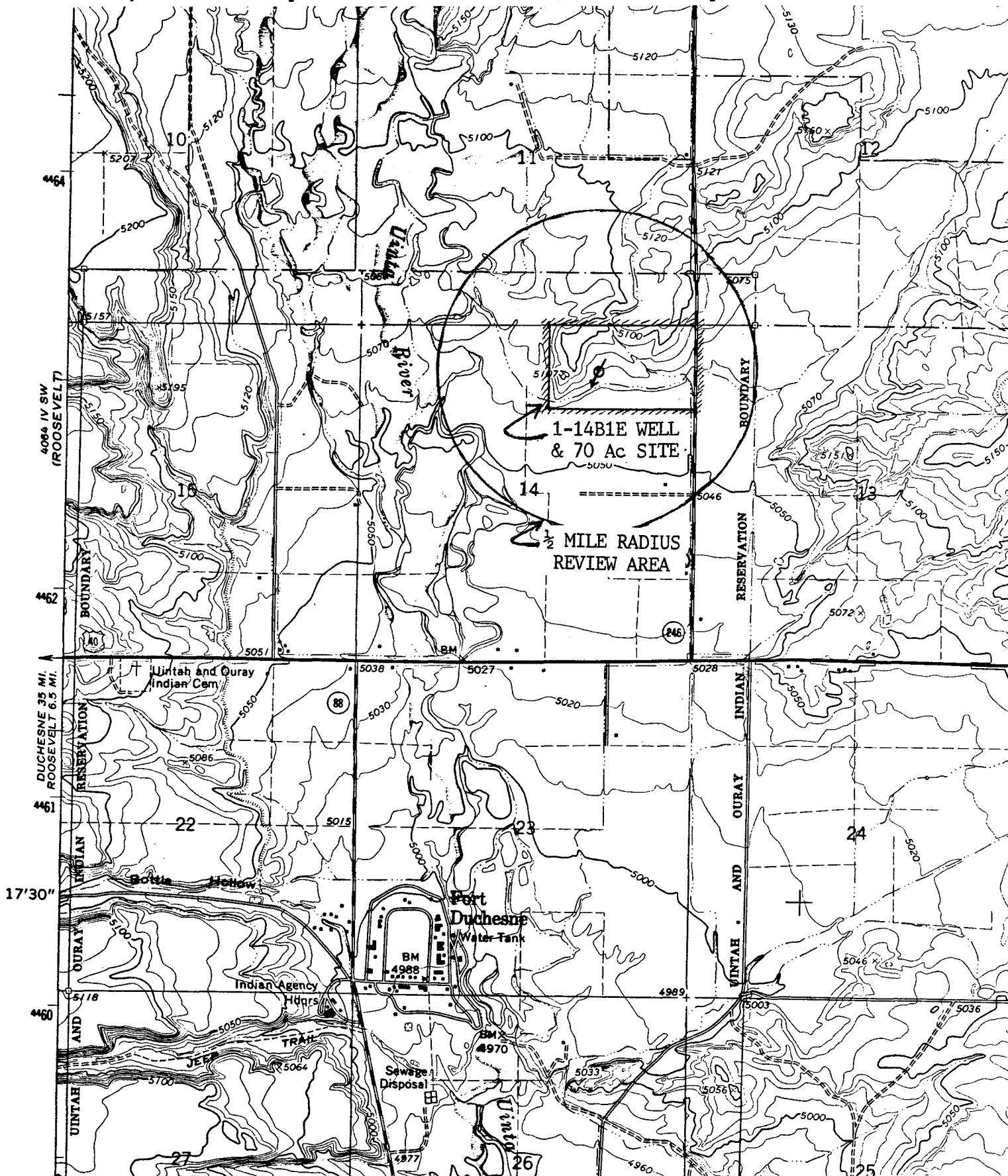
T
1
S

T
2
S

■ UTE INDIAN TRIBE

ATTACHMENT B
FORM 4 UIC

Topographic map of vicinity depicting the area of review and pertinent surface features. There are no wells, springs, surface water bodies, or drinking water wells known to the applicant within one quarter mile of the facility property boundary with the exception of the Uinta River (labelled on map).



ATTACHMENT C
FORM 4 UIC

There are no other wells within the area of review as evidenced by Attachment B. No corrective action is proposed by the applicant since this is a conversion of an oil well to disposal for Class I and II. The injection permit applied for herewith will not require operation over the fracture pressure of the injection formation.

ATTACHMENT D
FORM 4 UIC

Within the area of review there is one formation other than recent alluvial gravels that qualifies as an underground source of drinking water. The formation is the Eocene to Oligocene Duchesne River formation. As depicted in Figure D-3, the Duchesne River formation occurs at or very near the surface and extends to as much as 1,200' below the surface. This formation and contained aquifers are usable as USDW since the water therein contains less than 3,000 mg/l dissolved solids.

It is apparent from Figure D-3 that the proposed injection zones in the lower-most Uinta formation tuffaceous sandstone (previously named the Evacuacion Creek member of the Green River formation) and the upper tuffaceous sandstones of the Parachute Creek member of the Green River formation lie 4,000' below the base of the Duchesne River formation. The proposed injection zone will have no effective communication with any USDW and it is beneath the recognized base of moderately saline waters in overlying aquifers as depicted by Figure D-2 (see explanation presented herewith as Figure D-1).

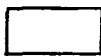
Figures D-1 and D-2 are from USGS Open File Report 87-397. The water quality zone contours are drawn on the base of moderately saline water (3,000 to 10,000 mg/l dissolved solids) as recognized in deep wells through interpretation of geophysical logs. This surface is also the top of brine in the subsurface. The proposed injection zones are beneath the top of brine not only as interpreted from the map (Figure D-2) but also as determined from samples of water recovered on a DST in the 1-14B1E well from the uppermost injection zone as proposed when that zone was originally penetrated by the bit.

USGS Open File Report 87-397 reiterated previous interpretations that the Uinta Basin is likely a ground water basin of internal drainage with a possible deep outlet near the axis of the basin near the western edge of the basin somewhere between the San Rafael Swell and the Wasatch Plateau. If the contours of Figure D-2 are interpreted as a potentiometric surface for groundwater of similar quality in communication, it becomes apparent that the basin is indeed internally drained. Basic hydrological interpretation of ground water movement based upon the potentiometric surface theory is indicated by arrows normal to the contours in Figure D-2. There should be a strong sweep westerly then northward from the proposed injection site carrying injected fluids deep into the basin center.

FIGURE D-1

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

EXPLANATION



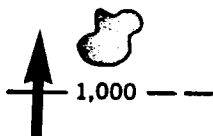
DUCHESNE RIVER FORMATION AND UNDERLYING TERTIARY ROCKS—
Either at land surface or underlying alluvial and glacial deposits, the Bishop
Conglomerate, and Browns Park Formation



MESOZOIC AND PALEOZOIC ROCKS—Either at land surface or underlying
alluvial and glacial deposits, the Bishop Conglomerate, and Browns Park
Formation



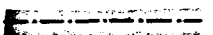
PRECAMBRIAN ROCKS—Either at the land surface or underlying alluvial and
glacial deposits, the Bishop Conglomerate, and Browns Park Formation



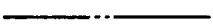
KNOWN OIL AND GAS FIELDS

TOP OF HIGHLY SALINE AQUIFER (PROPOSED INJECTION ZONE)

WATER-QUALITY-ZONE CONTOUR—Shows altitude of base of moderately
saline water (3,000 to 10,000 milligrams per liter dissolved solids). Dashes
where approximately located. Contour intervals 1,000 and 500 feet.
National Geodetic Vertical Datum of 1929 Arrow depicts inferred
direction of water movement in highly saline aquifer.



Boundary between the Salt Lake meridian and base line survey system and
the Uinta meridian and base line survey system



Boundary of the Uinta Basin drainage in Utah

b-3429

WELL OR TEST HOLE AND ALTITUDE, IN FEET—Water salinity
determined from geophysical logs. Horizontal line (—) indicates a
well in which one or more intervals of fresh to moderately saline
water is known (from chemical analysis) or believed (from analysis
of logs) to occur more than 500 feet below the base of moderately
saline water shown. Vertical line (|) indicates that well is at least
10,000 feet deep. "a" indicates the base of moderately saline is at
or above the altitude listed. Altitude given is of the highest permeable
interval shown on the geophysical logs. "b" indicates that either no
very saline to briny water is present at the indicated site or the base
of moderately saline water is below the bottom of the logs analyzed.
Number shown is the altitude either of well bottom (water salinity
from a chemical analysis) or of the lowest point logged. National
Geodetic Vertical Datum of 1929

A — A'

Cross section of aquifers



1-14B1E and Section
outline (14)

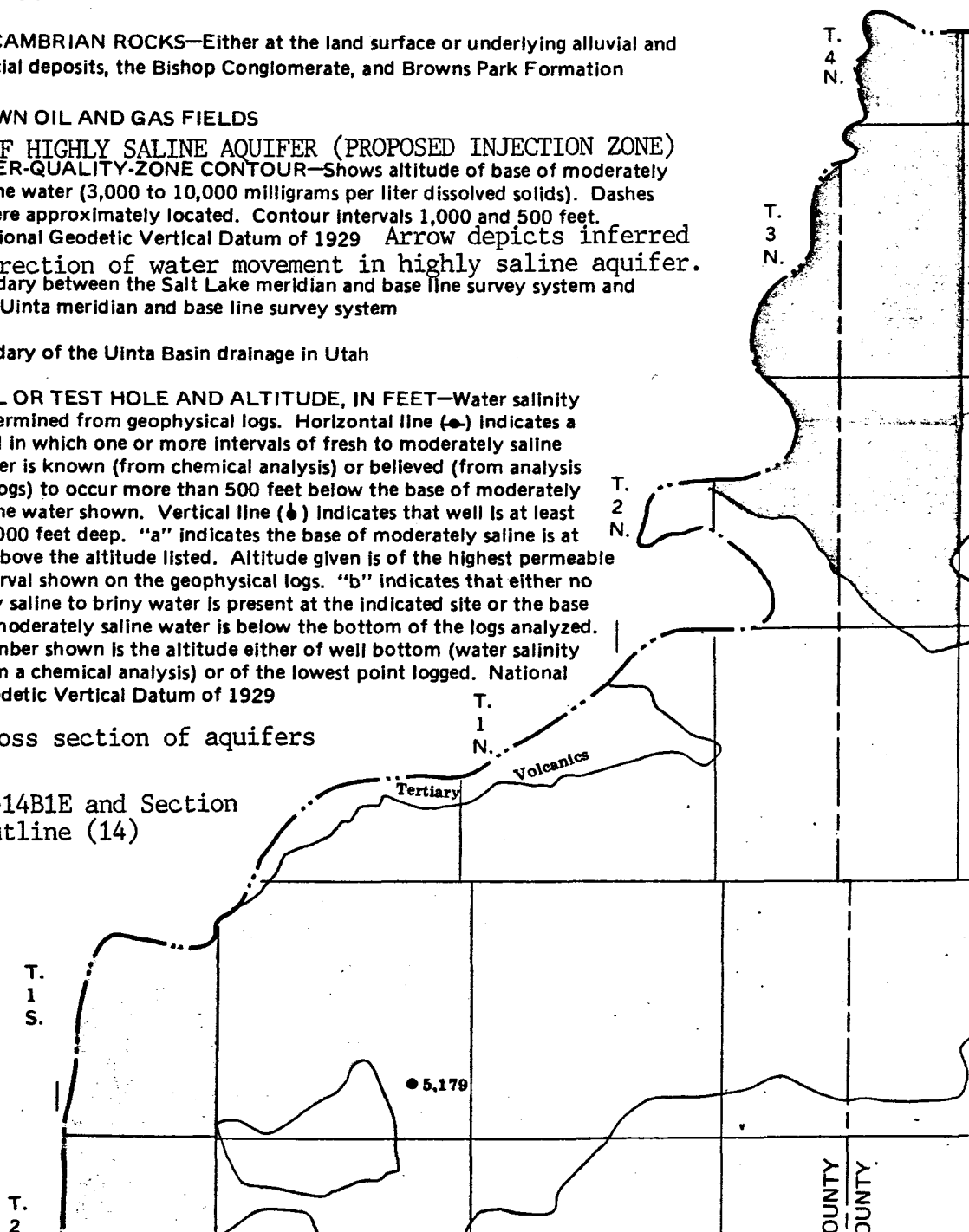
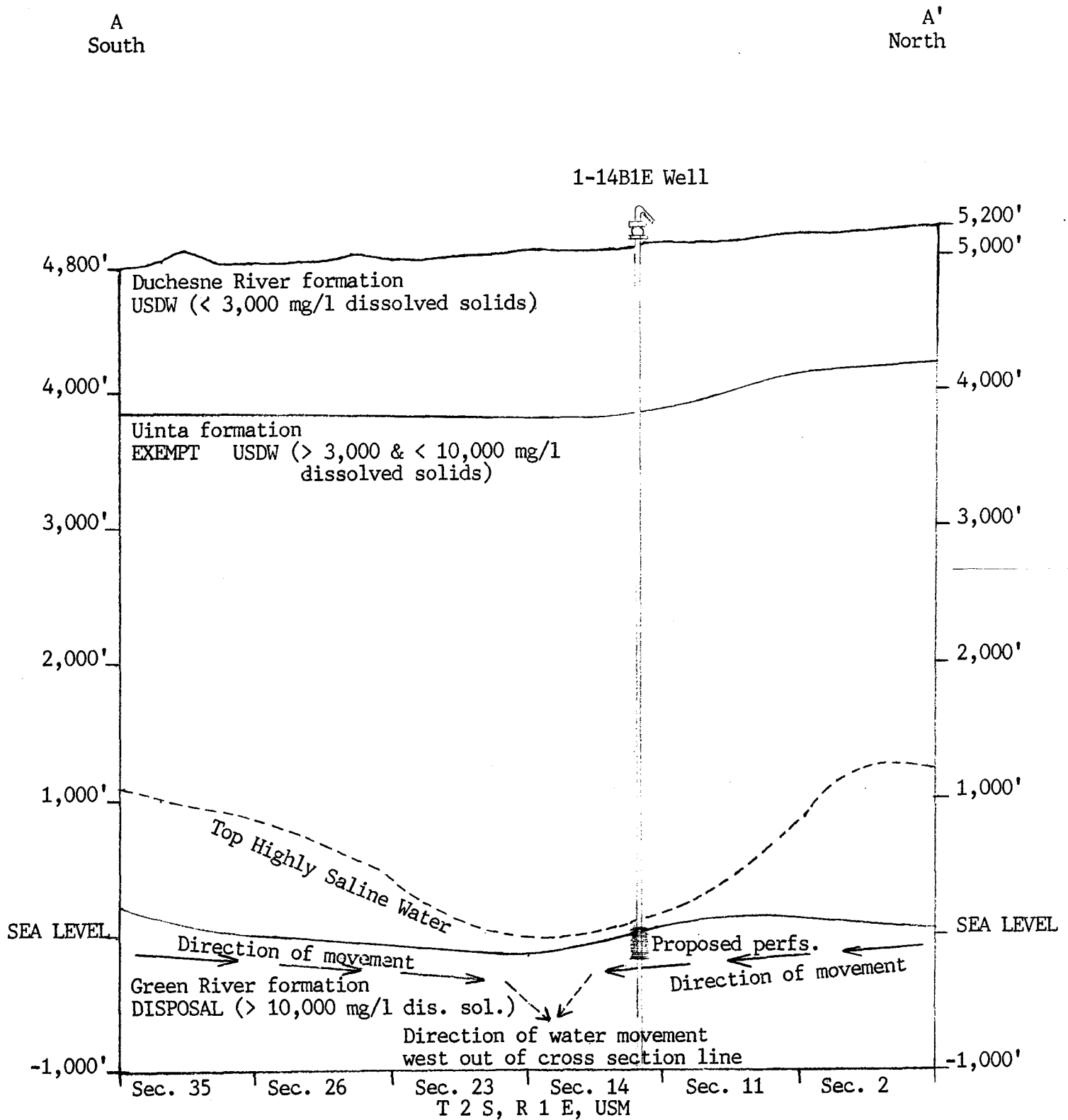


FIGURE D-2

Topographic map of the Neola, Utah area. The map shows contour lines with elevations ranging from 1,000 to 5,000 feet. Key locations include Neola, Roosevelt, Green, and the Greater Altamont-Bluebell Field. The map is divided into sections by range and township lines (R. 15 E. to R. 20 E. and T. 1 N. to T. 4 N.). The map includes a scale bar in miles (0 to 20) and kilometers (0 to 30). The map is titled "FIGURE D-2".

ND WATER IN THE NORTHERN UINTA BASIN, UTAH

FIGURE D-3



ATTACHMENT E
FORM 4 UIC

No underground sources of drinking water will be affected by the injection proposed herein.

ATTACHMENT F
FORM 4 UIC

The regional geologic setting is depicted by Figures F-1-3 in the Uinta Basin. The cross section (Figure F-2) indicates the proposed injection zone at the contact between the Uinta formation and the Green River formation. From the cross section, it is apparent how the south limb recharge area produces down-dip flow into the aquifers of the Uinta Basin, but it is important to note that the strongest recharge is into the north limb from the Uinta Mountains. The two flow vectors converge in the basin axis area and flow down dip and west deeper into the basin to an internal outlet.

Figure F-4 depicts the structural geology of the top of the Parachute Creek member of the Green River formation. Note that the top of the brine is above the elevation of the proposed injection zone. The injection zones are tuffaceous sandstones encased in shales near the contact of the Uinta formation with the Green River formation. Further details of the lithology of these zones is presented in Attachment G.

FIGURE F-1

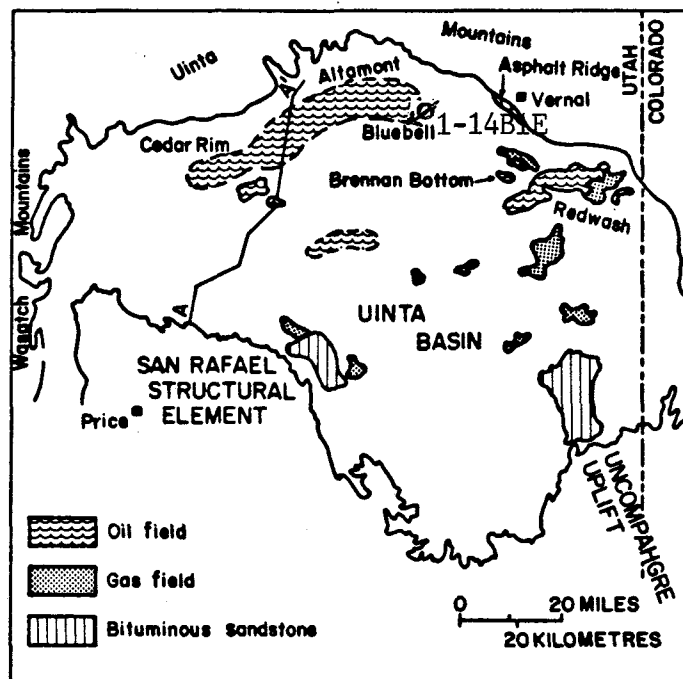


Fig. 1 — Index map of the Uinta Basin showing major oil and gas fields and bituminous sandstone deposits in Tertiary rocks, and line of section A-A' (Fig. 2).

FIGURE F-2

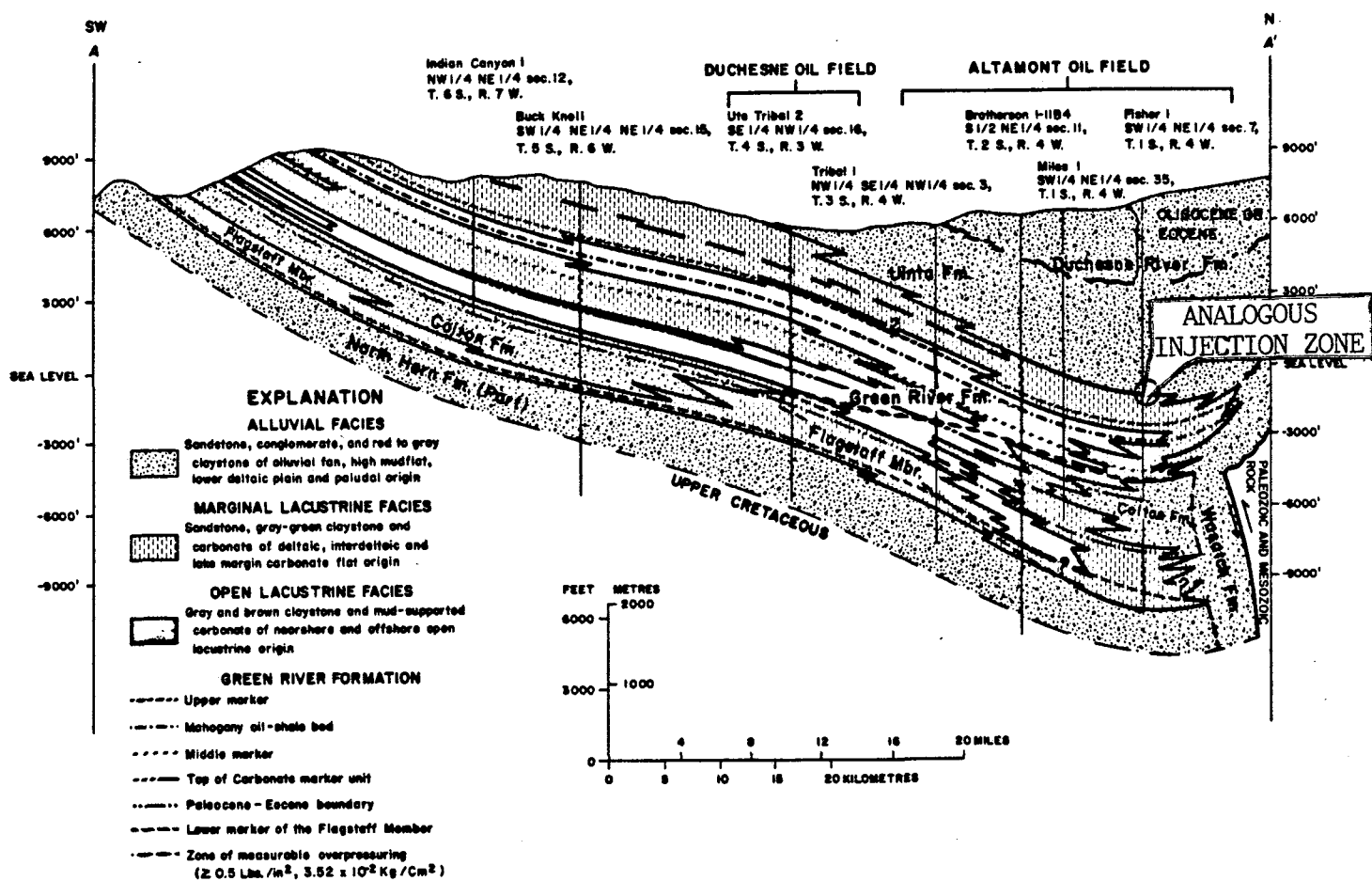


Fig. 2 — Generalized structural-stratigraphic cross section from outcrops on the southwest flank of the Uinta Basin, through Duchesne and Altamont-Bluebell oil fields, to the north-central part of the basin. Uinta Formation includes saline facies and equivalent lacustrine rocks assigned to the Uinta by Dane (1954).

FIGURE F-3

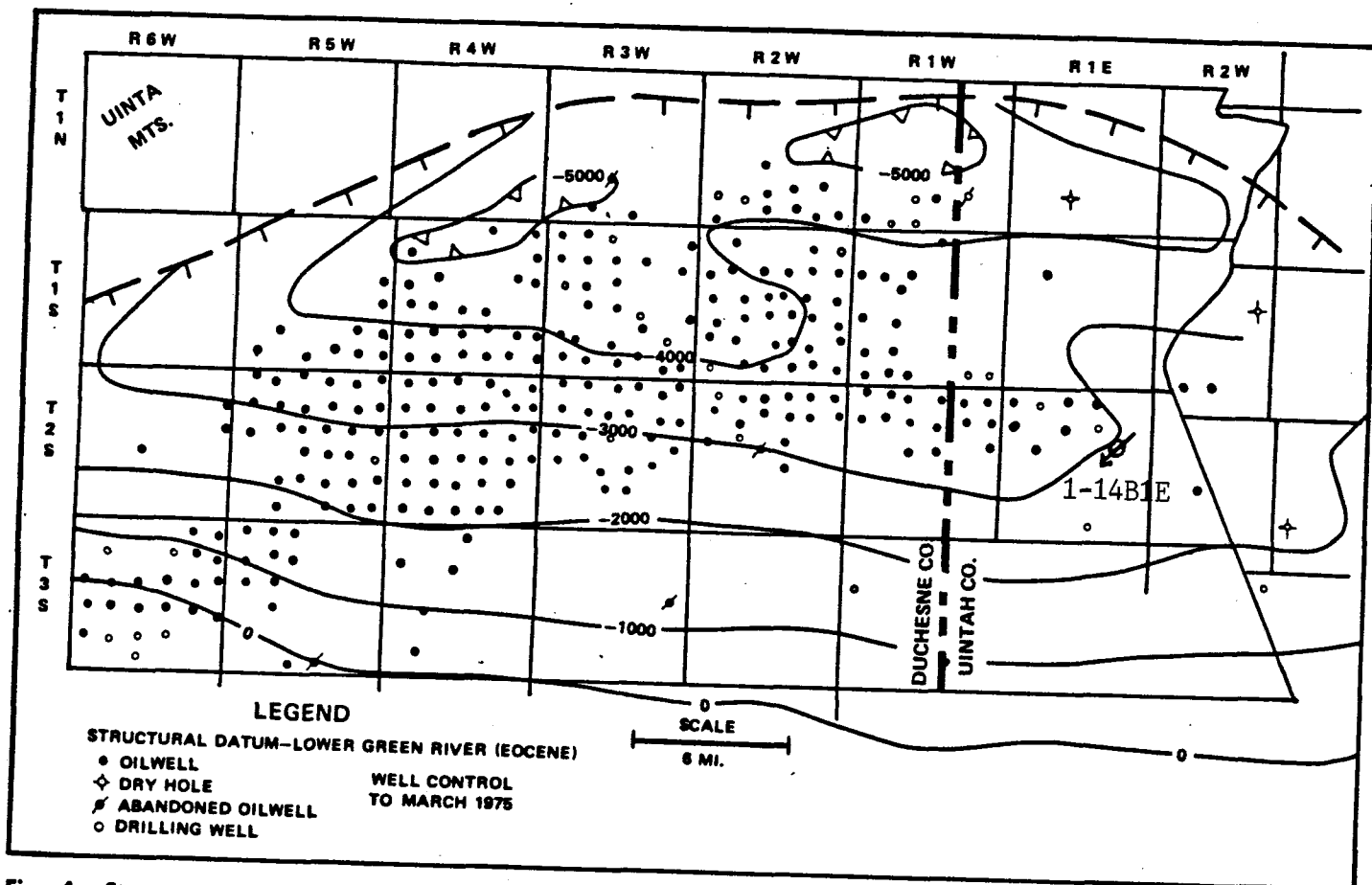
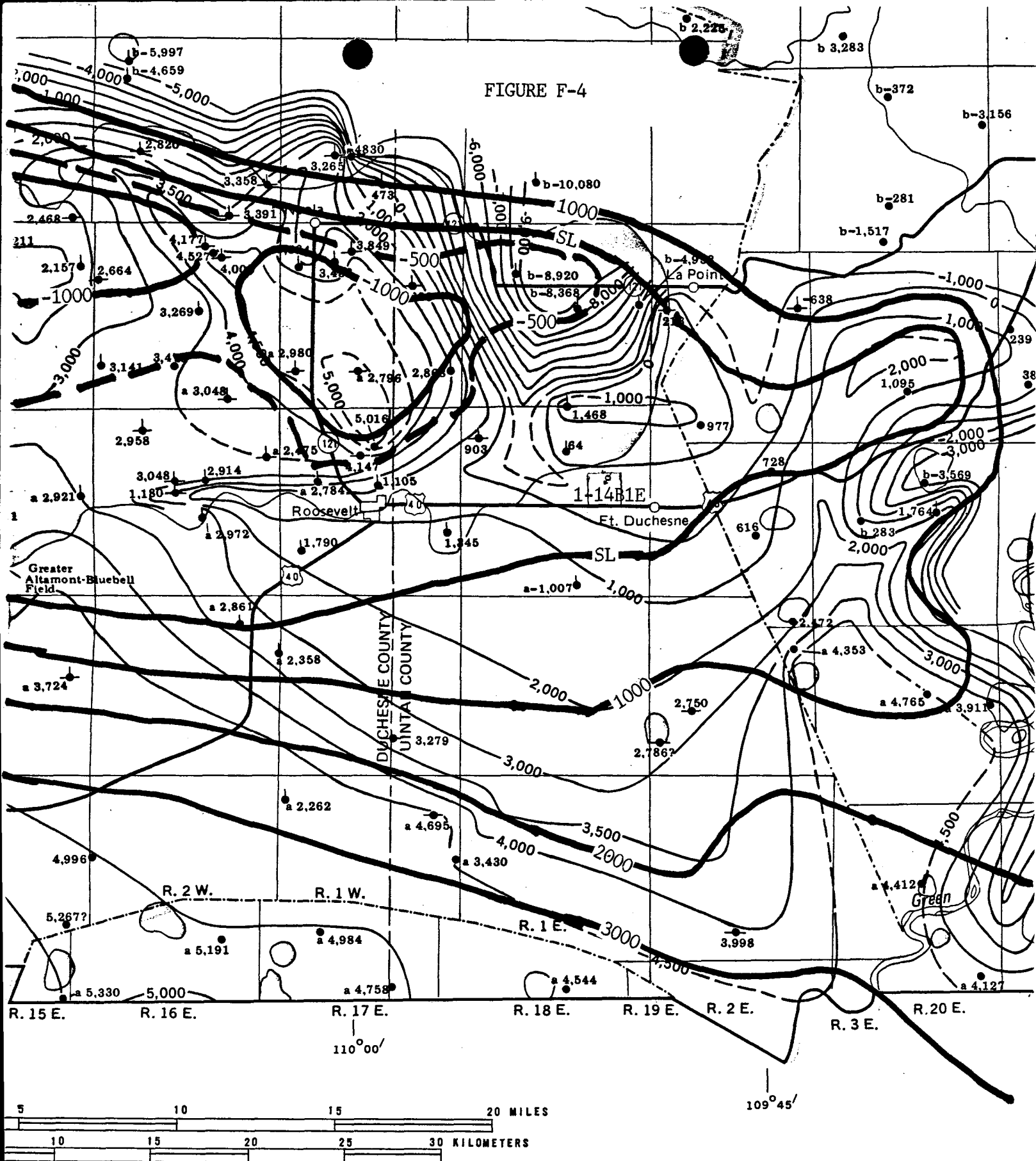


Fig. 4— Structure map middle Green River marker, Altamont-Bluebell field, Utah. The structural nose across the east end of the field is the site of the original shallow Bluebell production.

FIGURE F-4



ND WATER IN THE NORTHERN UINTA BASIN, UTAH

SL Structural Contours in Feet AMS on Top of Parachute Creek Member of the Green River Formation Overlain on Depth to Brine Map (See Figure D-1 for Explanation of Base Map)

ATTACHMENT G
FORM 4 UIC

The geophysical logs produced from the 1-14B1E well upon drilling in late 1980 provide base data on the radioactive, electrical, and relative density properties of the proposed injection zones. In conjunction with the drill stem test data measured on October 27, 1980, in the lowermost Uinta formation sandstone (old name-Evacuation Creek member of the Green River formation), the log information can be utilized to interpret substantial geological data and draw conclusions concerning injection and confining zone lithology, depth and fracture pressures.

The log excerpts are included herewith labelled Figures G-1 and G-2, and the DST data is labelled Appendix G-1. The log excerpts are embellished with the geological formation names of the zones as well as DST synopsis and the layout of the proposed perforations for injection use above the proposed plug back depth of 5,308'. Depths depicted are measured from a Kelly bushing elevation of 5,081'.

Generally, the Uinta formation is composed of calcareous shale, some limestone, claystone, siltstone, and sandstone. It is a fluvial facies in the eastern and western ends of the basin that interfingers with rocks similar in appearance to the overlying Duchesne River formation. Where intersected by the 1-14B1E well, the Uinta formation contains thinner bedded calcareous lake deposits characteristic of the center of the basin. The Uinta formation resulted from the presence of a fluvial dominated deltaic, fresh water lake depositional environment.

The Parachute Creek member of the Green River formation is mostly lacustrine shale, some limestone, marlstone, and siltstone. Below the proposed injection zone, this member contains beds of oil shale and carbonate evaporite. This formation resulted from the presence of a fluvial dominated deltaic depositional environment in a saline lake. The salinity of the Green River era lake is a distinctive difference from the Uinta era lake.

The proposed injection zones in both the Uinta and Green River formations are tuffaceous sandstone that is light brown to white, very fine grain, frosted in appearance with grains that are sub-angular to sub-rounded and in general can be characterized as argillaceous and slightly calcareous. The confining zones are calcareous shale interbedded with argillaceous siltstone. From the top down, the proposed injection zone and confining zones in between appear as follows: 4,992'-5,016'=shale; 5,016'-5,044'=sandstone and siltstone (injection zone); 5,044'-5,120'=shale; 5,120'-5,140'=sandstone and siltstone (injection zone); 5,140'-5,155'=shale; 5,155'-5,160'=sandstone (injection zone); 5,160'-5,194'=shale; 5,194'-5,226'=sandstone and siltstone (injection zone); 5,226'-5,255'=shale; 5,255'-5,263'=sandstone and siltstone (injection zone); and finally 5,263'-5,298'=shale.

The fracture pressure was determined for the top of the proposed injection zone using DST data and downhole log densities. The pore pressure in the middle of the DST zone was determined to be 2425 psi at 5,022'. The overburden pressure was determined to be 6,750 psi and using a Poisson's ratio term of .3, the minimum horizontal stress calculated to 3,723 psi. Ignoring any adjustment for the tensile strength of the rock involved, hence assuming reopening any existing fractures in the zone, the fracture reopening pressure would be 4,798 psi. $P_{fr} = 3(\text{Min. Horiz. Stress}) - \text{Max. Horiz. Stress} - \text{Pore Press.}$ or $P_{fr} = 3(3,723 \text{ psi}) - 3,946 \text{ psi} - 2,425 \text{ psi} = 4,798 \text{ psi}$. The P_{fr} in the confining shales is expected to be at least 10% higher.

DST 4998'-5045' 1 hr,
 rec 45' WCM, 755' GCW,
 FFP 375#, FSP 2151#,
 FHP 2425#, Sample:
 water with 10,000 ppm
 Chlor., .5 Ohm-M @ 52°
 PROPOSED PERFS: 5018'-
 5044'

FIGURE G-1
 CAL, GR, CNL, FDC

Uinta Formation
 Evacuation Creek Mbr.
 Green River Fm.
 (Uinta Formation)

Parachute Creek Mbr.
 Green River Formation

5120'-
 5140'

5155'-
 5160'

5194'-
 5226'

5255'-
 5263'

CIBP @ 5315' w/2 sks
 (Proposed)

0.000	0.000	0.000	0.000
10.00	10.00	10.00	10.00
100.0	100.0	100.0	100.0
1.0	1.0	1.0	1.0

PARAMETERS								
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
MC		CAL1	PSNR		2.330	DS	INCH	6.750
NSCH	G/C3	2.710	PD	G/C3	1.000	WATR	LINE	
NSCH	ML/H	3.650	SD		DATE			
NSCH	ML/H	3.650	SDR	DOWN	1.000	FWI		PHIX
DO		0.0	SDS		OPEN			

FIGURE G-2

GR, SP, DIL-SFL

DST 4998'-5045' 1 hr, rec
 45' WCM, 755' GCW, FFP
 375#, FSP 2151#, FHP 2425#
 Sample 10,000 ppm Chlor.,
 .5 Ohm-M @ 52° (water)

PROPOSED PERFS: 5018'-
 5044'

Uinta Formation

Evacuation Creek Mbr.
 Green River Formation
 (Uinta Formation)

Parachute Creek Mbr.
 Green River Formation

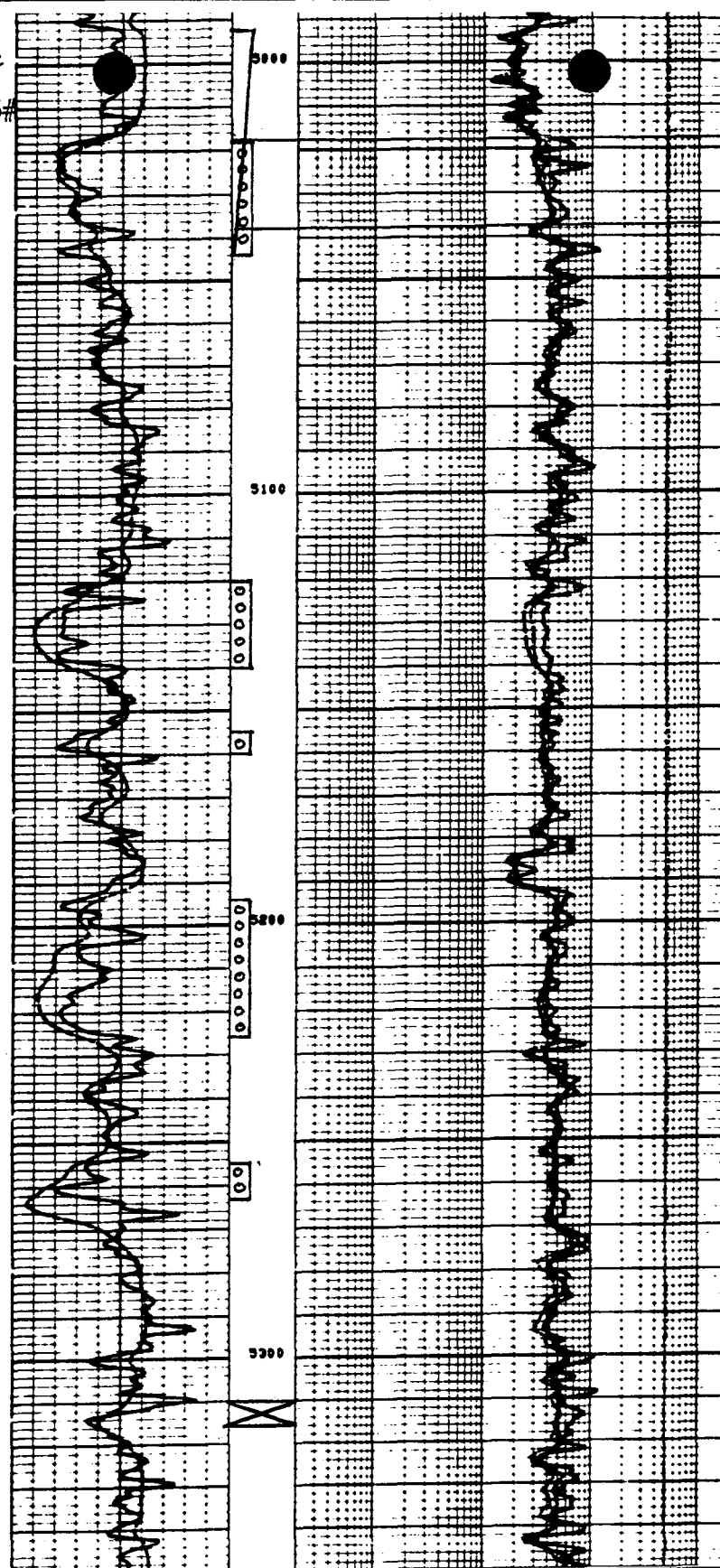
5120'-
 5140'

5155'-
 5160'

5194'-
 5226'

5255'-
 5263'

CIBP @ 5135' w/2 sks
 (Proposed)



SP (SHV)		PERM (DMM)	
-100.0	0.0	0.2000	2000.
100.0	300.0	0.2000	2000.
0.0	100.0	0.2000	2000.
Run 1		0.2000	

PARAMETERS					
NAME	UNIT	VALUE	NAME	UNIT	VALUE
MC		CAL1	PSMR		2.300
WSEN	G/C3	8.600	FB	G/C3	1.000
BSEC	MM/M	8.710	SMF		WATE
RSEC	MM/M	8.630	SDR	DMM	1.000
DO		0.0	BHS		OPEN
			DS	INCH	9.075
			NATR		SAND
			FPNI		PHIX

APPENDIX G-1

WELL IDENTIFICATION		
COMPANY:	PAGE PETROLEUM, INC. P.O. BOX 1656 ROOSEVELT, UTAH 84066	CUSTOMER: SAME
WELL:	PAGE-EXXON-UTE #1-14-B1E	LOCATION: SEC. 14, T2S R1E
TEST INTERVAL:	4992' TO 5045'	FIELD: WILD CAT
TEST NO:	1	TEST DATE: 10-27-80
COUNTY:	UINTAH	STATE: UTAH
TECHNICIAN:	RICHARDS (VERNAL)	TEST APPROVED BY: MR. C.R. WHITE

EQUIPMENT AND HOLE DATA		
TEST TYPE:	H.F.E. OPEN HOLE	DRILL PIPE LENGTH: 4380 FT.
ELEVATION:	5050	DRILL PIPE I.D.: 3.80 IN.
TOTAL DEPTH:	5045	DRILL COLLAR LENGTH: 565 FT.
MAIN HOLE/CASING SIZE:	9 5/8	DRILL COLLAR I.D.: 2.25 IN.
RAT HOLE/LINER SIZE:	-	PACKER DEPTHS: 4980 & 4992 FT.
FORMATION TESTED:	UINTAH	
NET PROD. INTERVAL:	11	DEPTHS REF. TO: KELLY BUSHING
POROSITY:	6	

TEST TOOL CHAMBER DATA			FLUID DATA		
SAMPLER PRESSURE:	20	PSIG	TYPE:	LOW SOLIDS	SEMI DISPER
RECOVERED OIL GRAVITY:	API @	DEG. F.	WEIGHT:	9.2	LB/GAL.
RECOVERY COR:		FT3/BBL.	VISCOSITY:	45	SEC.
SAMPLE CHAMBER CONTENTS			WATER LOSS:	13.6	CC
FLUID	VOLUME	RESIST. (OHM-IN)	TEMP. (DEG F)	CHLOR. (PPM)	
GAS:	- FT. 3				
OIL:	- CC				
WATER:	2400 CC	.5	52	10000	
FLUID:	- CC				
FILTRATE:					
TOTAL LIQUID:	2400 CC				

REMARKS

NO. OF REPORTS REQUESTED: 10 (5X'S)

FIELD REPORT NO. 253080

----- SURFACE INFORMATION -----

DESCRIPTION(RATE OF FLOW)	TIME	PRESSURE PSIG	SURFACE CHOKE
SET PACKER	1430	-	1/4"
OPENED TOOL	1442	-	"
BLOW, 1/4" IN WATER			
	1444	2 OZ	"
CLOSED FOR INITIAL SHUT-IN	1453	5.75 OZ	"
FINISHED SHUT-IN	1523	-	"
RE-OPENED TOOL	1524	-	"
BLOW, 1/4" IN WATER			
	1533	4 OZ	"
	1544	7 OZ	"
	1554	8.5 OZ	"
	1604	8 OZ	"
	1614	7.75 OZ	"
CLOSED FOR FINAL SHUT-IN	1624	6.5 OZ	"
FINISHED SHUT-IN	1724	-	"
PULLED PACKER LOOSE	1727	-	-

CUSHION TYPE: -

- FT

- PSIG

11/16 IN. BOTTOM CHOKE

----- RECOVERY INFORMATION -----

RECOVERY	FEET	BARRELS	%OIL	%WATER	%OTHERS	API GRAV.	DEG.	RESIST	DEG.	CHL PPM
WATER CUT MUD	45	.64						1.2	45	2400
GAS CUT WATER	755	5.47								
TOP SAMPLE								.38	48	11000
BOTTOM SAMPLE								.5	50	10000

FIELD REPORT NO. 25388D

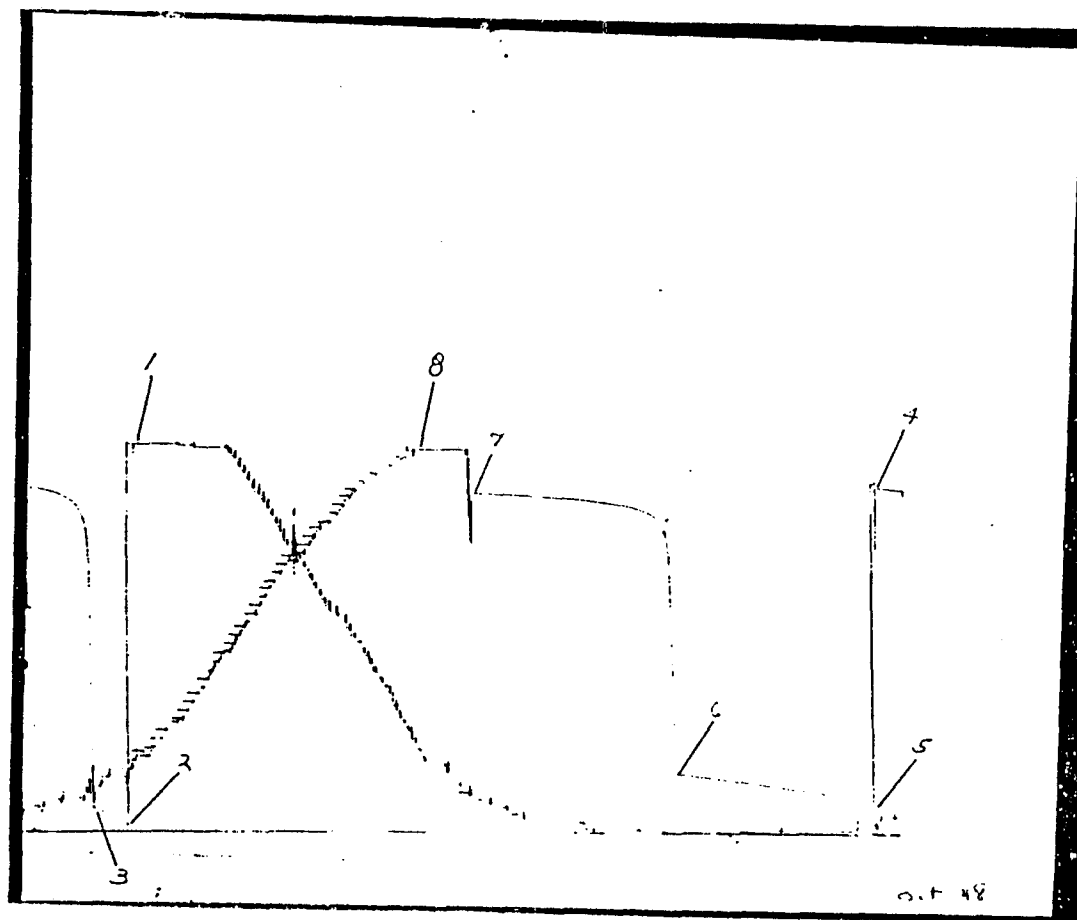
FIELD REPORT NO.: 25380 D

CAPACITY: 4,700#

INSTRUMENT NO.: J-1238

NUMBER OF REPORTS: 10-

JOHNSTON
Schlumberger



PRESSURE LOG

FIELD REPORT NO. 25380D

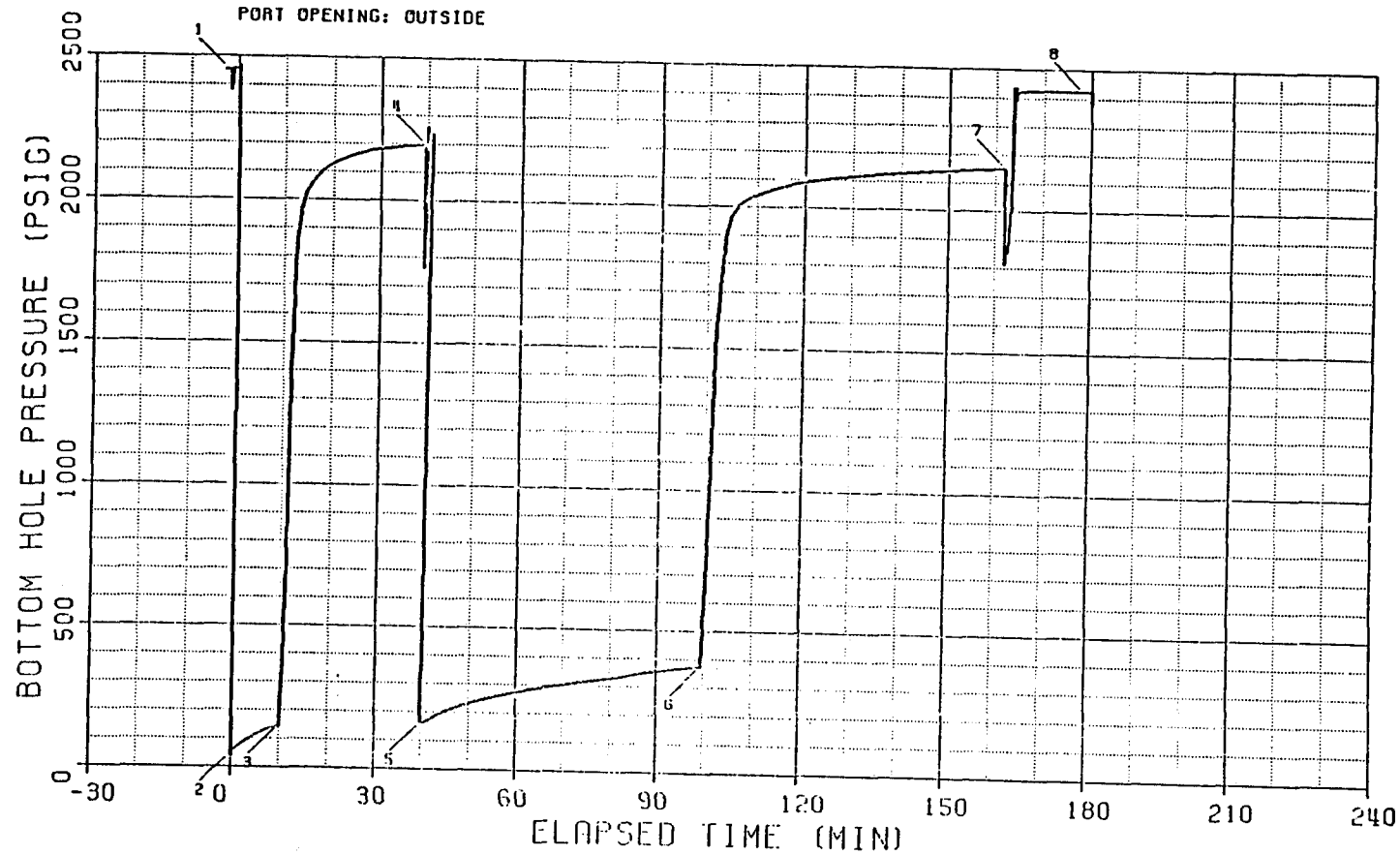
INSTRUMENT:

NUMBER: J-1238

CAPACITY: 4700 PSI

DEPTH: 4998 FT

PORT OPENING: OUTSIDE



BOTTOM HOLE PRESSURE AND TIME DATA

INSTRUMENT NO.: J-1238
PORT OPENING: OUTSIDE

CAPACITY (PSI): 4769
BOTTOM HOLE TEM: (F): 114

DEPTH (FT): 4998
PAGE 1

EXPLANATION	LABELED POINT	PRESSURE (PSIG)	ELAPSED TIME (MIN)
HYDROSTATIC MUD	1	2454	-2.3
START FLOW	2	52	0.0
END FLOW & START SHUT-IN	3	148	9.9
END SHUT-IN	4	2198	39.4
START FLOW	5	165	39.8
END FLOW & START SHUT-IN	6	375	99.3
END SHUT-IN	7	2151	161.9
HYDROSTATIC MUD	8	2425	178.9

* SUMMARY OF FLOW PERIODS *

FLOW PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF FLOW (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)
1	0.0	9.9	9.9	52	148
2	39.3	99.3	59.5	165	375

* SUMMARY OF SHUT-IN PERIODS *

SHUT-IN PERIOD	ELAPSED TIME AT START (MIN)	ELAPSED TIME AT END (MIN)	DURATION OF SHUT-IN (MIN)	PRESSURE AT START (PSIG)	PRESSURE AT END (PSIG)	FINAL FLOW PRESSURE (PSIG)	PRODUCING TIME (MIN)
1	9.9	39.4	29.4	148	2198	148	9.9
2	99.3	161.9	62.6	375	2151	375	69.4

FIELD REPORT NO. 25389D
INSTRUMENT NO. J-1238

FIELD REPORT NO. 25388D
INSTRUMENT NO. J-1238TEST PHASE : FLOW PERIOD # 1

ELAPSED TIME (MIN) *****	DELTA TIME (MIN) *****	FLOWING PRESSURE (PSIG) *****
0.0	0.0	52
5.0	5.0	112
9.9	9.9	148

TEST PHASE : SHUT-IN PERIOD # 1

1. FINAL FLOW PRESSURE ["P "] = 148 PSIG
 2. PRODUCING TIME ["T "] = ^{WF}_P 9.9 MIN

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P "] (PSIG) *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE [P - P] WS WF *****
9.9	0.0	148		0
10.9	1.0	699	1.038	550
11.9	2.0	1582	0.775	1404
12.9	3.0	1899	0.634	1751
13.9	4.0	1976	0.542	1836
14.9	5.0	2036	0.475	1888
15.9	6.0	2065	0.424	1917
16.9	7.0	2085	0.383	1937
17.9	8.0	2134	0.359	1956
18.9	9.0	2116	0.323	1968
19.9	10.0	2128	0.299	1980
21.9	12.0	2144	0.262	1996
23.9	14.0	2153	0.233	2010
25.9	16.0	2160	0.210	2020
27.9	18.0	2176	0.191	2028
29.9	20.0	2181	0.175	2033
31.9	22.0	2186	0.162	2038
33.9	24.0	2191	0.150	2042
35.9	26.0	2194	0.140	2046
37.9	28.0	2196	0.132	2048
39.4	29.4	2198	0.126	2050

FIELD REPORT NO. 253000
INSTRUMENT NO. J-1238

TEST PHASE : FLOW PERIOD # 2

ELAPSED TIME (MIN) *****	DELTA TIME (MIN) *****	FLOWING PRESSURE (PSIG) *****
39.0	0.0	165
44.0	5.0	190
49.0	10.0	231
54.0	15.0	254
59.0	20.0	273
64.0	25.0	289
69.0	30.0	302
74.0	35.0	315
79.0	40.0	329
84.0	45.0	342
89.0	50.0	355
94.0	55.0	366
99.3	59.3	375

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P" ^{WF}] = 375 PSIG
2. PRODUCING TIME ["T" ^P] = 69.4 MIN

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P" ^{WS}] (PSIG) *****	LOG [(T + DT)/DT] P *****	DELTA PRESSURE [P - P] ^{WF} WS WF *****
99.3	0.0	375		0
100.3	1.0	370	1.046	413
101.3	2.0	367	1.553	932
102.3	3.0	365	1.303	1290
103.3	4.0	364	1.264	1469
104.3	5.0	363	1.173	1567
105.3	6.0	361	1.099	1605
106.3	7.0	360	1.038	1628
107.3	8.0	357	0.985	1641
108.3	9.0	355	0.940	1653
109.3	10.0	353	0.900	1663
110.3	11.0	351	0.832	1675
111.3	12.0	350	0.775	1688
112.3	13.0	348	0.727	1698
113.3	14.0	347	0.686	1706
114.3	15.0	345	0.650	1714
115.3	16.0	343	0.619	1720
116.3	17.0	342	0.590	1725
117.3	18.0	340	0.565	1730
118.3	19.0	338	0.542	1734
119.3	20.0	336	0.520	1738

FIELD REPORT NO. 25300D
INSTRUMENT NO. J-1238

TEST PHASE : SHUT-IN PERIOD # 2

1. FINAL FLOW PRESSURE ["P" ""] = 375 PSIG
2. PRODUCING TIME ["T" ""] = 69.4 MIN
P

ELAPSED TIME (MIN) *****	DELTA TIME ["DT"] (MIN) *****	SHUT-IN PRESSURE ["P" ""] (PSIG) *****	LOG [(T +DT)/DT] P *****	DELTA PRESSURE [P - P] VS WF *****
134.3	35.0	2121	0.475	1746
139.3	40.0	2127	0.437	1752
144.3	45.0	2133	0.405	1758
149.3	50.0	2138	0.378	1764
154.3	55.0	2144	0.355	1769
159.3	60.0	2149	0.334	1773
161.9	62.6	2151	0.324	1776

ATTACHMENT H
FORM 4 UIC

The average daily rate of fluid injection is anticipated to be 5,000 barrels of produced salt water with 5 barrels of hazardous waste blended. The maximum daily rate will be unlikely to exceed 10,000 barrels of produced salt water blended with 20 barrels of hazardous waste. The average injection pressure will be 750 psi and maximum of 1,250 psi. The annulus fluid will be fresh water treated for oxygen, bacteria, and scale.

The hazardous wastes that are proposed to be disposed of by blending with oil field produced salt water will include and are limited to (except by prior approval of the EPA): motor oil recovered after use, petroleum based lubricants, solvents, antifreeze, , and common agricultural pesticides. The density of these chemicals is generally less than that of water. They are not corrosive in comparison to the produced salt water and will tend to mitigate some of that corrosion problem. The chemical, physical, radiological, and biological characteristics of the above named wastes are published on record. The source of the hazardous materials will be public utilities, industrial installations, and homeowners of the Uinta Basin area including the Ute Indian Tribe.

The bulk of the injected fluid will be water produced from oil wells within economical trucking distance of the proposed injection site. This water is typically highly saline, ranging from 7,000 to as high as 300,000 mg/L. Other than sodium chloride, the water can be of calcium chloride type or in shallower zones of sodium bicarbonate or sodium sulfate type. The source can vary from produced oil field water to drilling circulation fluids such as mud filtrate.

ATTACHMENT I
FORM 4 UIC

The formation testing program was previously accomplished for the proposed injection well. The 1980 DST and geophysical logs provided all data required to determine fluid pressure, temperature, fracture pressure, and other physical, chemical, and radiological characteristics of the injection matrix and chemical and physical characteristics of the formation fluids.

ATTACHMENT J
FORM 4 UIC

No stimulation program is planned beyond a formation breakdown and perf cleanup with hyrdochloric acid and water.

ATTACHMENT K
FORM 4 UIC

Produced salt water from oil wells and hazardous wastes will be delivered to the proposed facility by trucks owned by Arrow Mud, other commercial truckers, and the operators equipment. Any drums or barrels will be treated as the property of waste generators and returned to them for disposal or treatment. No long term storage of any material other than in the permitted, bulk storage tanks is anticipated.

Produced water for disposal will be pumped into storage tanks to allow the separation of hydrocarbons and solid materials. The hydrocarbons will be sold and solids disposed of at an approved facility dependent upon content. Hazardous wastes will be stored in a separate tank or tanks and emulsified with salt water in a blending tank just upstream from the injection pump (triplex type). Pumping of fluid into the injection well will be intermittent depending upon supply of fluid and limited in volume by the maximum approved injection pressure.

ATTACHMENT L
FORM 4 UIC

The 1-14B1E will be plugged back to 5,310' and completed for injection with the following procedure:

1. Set 5" CIBP at 9,750' (45' into 5" liner) and cap with 2 sx cement;
2. Set 7 5/8" CIBP for 29.7# casing at 8,000' and cap with 2 sx cement;
3. Pressure test casing to 1,250 psi;
4. Set 200' cement plug by the balance method from 6,000' to 6,200';
5. Run CBL from 6,000' to 4,000' to verify top of cement from original production casing cementing;
6. Using existing perfs at 5,320' or augment with new perfs there, squeeze cement behind 7 5/8" production casing to bring cement top to 3,000';
7. Run CBL from 5,500' to 3,000' to determine quality of squeeze job and remediate if necessary;
8. Set 7 5/8" CIBP for 26.4# production casing at 5,315' and cap with 2 sx cement;
9. Pressure test production casing to 1,250 psi;
10. Perf selected intervals of the lower Uinta formation and upper Green River formation as measured from old KB of 5,081' with 4 spf phased 90°:

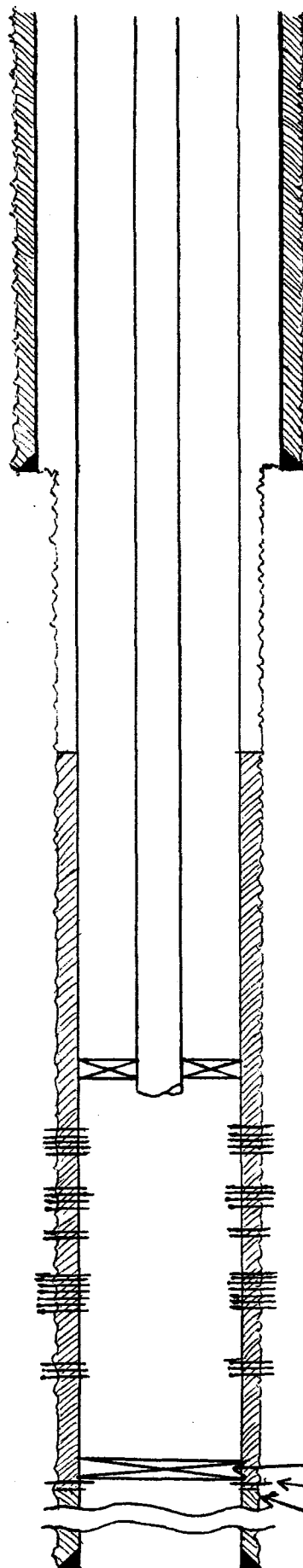
5,255'-5,263'
5,194'-5,226'
5,155'-5,160'
5,120'-5,140'
5,018'-5,044'
11. Clean up perfs with hydrochloric acid breakdown job;
12. Run packer for 26.4# 7 5/8" production casing on end of 2 7/8" tubing to set at 5,000';
13. Fill casing-tubing annulus above packer with fresh water treated for oxygen, bacteria, and scale;
14. Nipple up wellhead and pressure test casing-tubing annulus to 1,250 psi;
15. Injection test to determine efficacy of perfs and remediate if necessary.

ATTACHMENT M
FORM 4 UIC

The construction details of the well and facility are shown in Figures M-1 and M-2 respectively.

FIGURE M-1

Configuration of 1-14B1E as converted to Ute SWD 1-14B1E, Elevation KB=5,081'



10 3/4" 40.5# Surface Casing Set at 1,653' and Cemented to the Surface with 1,425 Sx Cement

Remedial Cement Top to be Placed at 3,000' by Squeeze with 640 Sx Cement

2 7/8" Tubing to Packer for 7 5/8" 26.4# Production Casing Set at 5,000'

Perfs in Lwr Uinta Fm. 5,018'-5,044' 4 Spf (104 holes)

Perfs in Upr Green R. Fm. 5,120'-5,140' 4 Spf (80 holes)

Perfs in Upr Green R. Fm. 5,155'-5,160' 4 Spf (20 holes)

Perfs in Upr Green R. Fm. 5,194'-5,226' 4 Spf (128 holes)

Perfs in Upr Green R. Fm. 5,255'-5,263' 4 Spf (32 holes)

Plugged Back with 7 5/8" CIBP and 2 Sx Cement (Top 5,310')

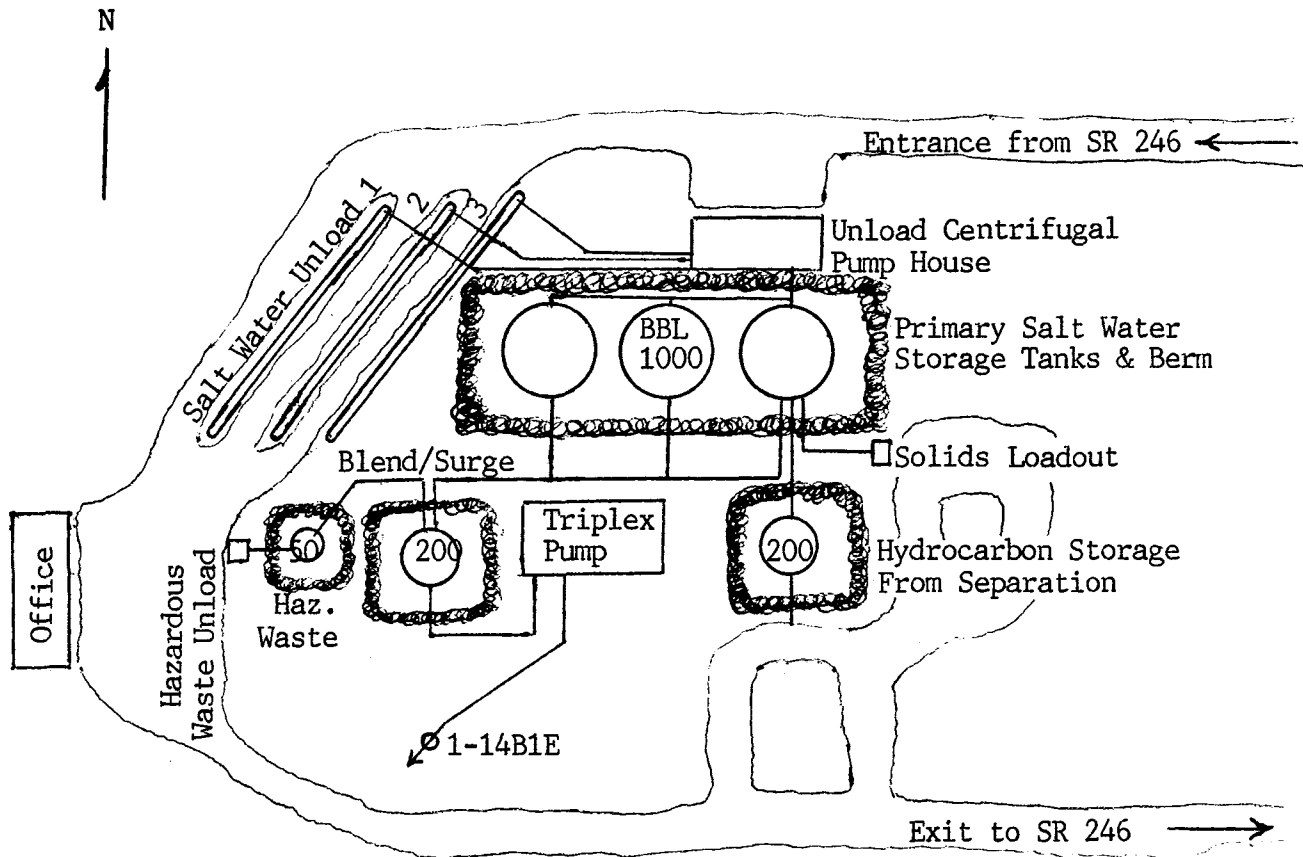
Two Perfs at 5,320' to be Used for Remedial Cementing

Existing Estimated Cement Top at 5,800'

7 5/8" 29.7# & 26.4# Production Casing Set at 9,910' with 830 Sx Cement

FIGURE M-2

Schematic plan view of disposal facilities at the 1-14B1E site



ATTACHMENT N
FORM 4 UIC

The injected fluid will undergo a pressure drop into the formation of variable quantity dependent upon surface pump pressure. The native fluid will be displaced by the transient injected fluid more or less evenly away from the wellbore during pumping, but at very low pump rates and during pumping cessation the inferred hydrodynamic regime in the injection zone will rapidly take over the dispersal pattern of the injected fluid.

Figures D-1, D-2, and D-3 presented with Attachment D herewith point out the inferred water flow directions in the injection zone. Although a full quantitative analysis of the hydrodynamic regime in this part of the Uinta Basin is not presented herein, it is apparent that the highly variable surface of the top of the brine depicted by Figure D-2 would result in strong subsurface formation water flow as indicated by the arrows on that figure. Another depiction of the magnitude of the head difference in the brine in the vicinity of the proposed injection well is the cross section (Figure D-3). The north and south tilts in the potentiometric surface of the brine toward the proposed injection well are more than 300' per mile. With the lack of significant structure on the injection zone, such fluid sweeps are capable of flushing away even very light hydrocarbons including natural gas.

With decreasing heads in the brine appearing to the west and ultimately to the north of the proposed injection well, it is apparent that injected fluid will follow that course into the the basin axis. Considering this information, the 1-14B1E site is particularly suited for hazardous waste disposal. With this knowledge, it is not surprising that the DST of the uppermost sandstone in the injection zone showed only a trace of natural gas.

ATTACHMENT O
FORM 4 UIC

A failure of the injection well at this site would preclude continued operation. Disposal fluid for injection would be diverted to other injection sites until a repair is effected. All potential for injection fluid migration into USDW's is eliminated under this plan.

ATTACHMENT P
FORM 4 UIC

Liquid metering and pressure recording devices will be installed at the appropriate locations to provide accurate injection information. Of particular importance will be the monitoring of the pressure in the casing-tubing annulus to determine tubing failure.

No monitor wells are planned and no manifold is anticipated to be in existence at this proposed site.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK		5. Lease Designation and Serial No. None
1a. Type of Work DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/>		6. If Indian, Allottee or Tribe Name Ute Tribe
b. Type of Well Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Convert to SWD <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone <input type="checkbox"/>		7. Unit Agreement Name
2. Name of Operator Arrow Mud c/o David L. Allin		8. Farm or Lease Name Ute Tribal
3. Address of Operator 323 Center St., Suite 208 SLC, UT 84103-1628		9. Well No. /Convert to 1-14B1E/Ute SWD 1-14B1E
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1522' FEL 735' FNL 43-047-30774 At proposed prod. zone 1522' FEL 735' FNL (At proposed injection zone)		10. Field and Pool, or Wildcat Bluebell East
14. Distance in miles and direction from nearest town or post office 8 miles east of Roosevelt, Utah		11. 00, Sec., T., R., N., or Blk. and Survey or Area NWNE Sec. 14, T2S, R1E, USM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drlg. line, if any) 585'	16. No. of acres in lease 70 acre tract	17. No. of acres assigned to this well 70 acres
18. Distance from proposed location to nearest well, drilling, completed, or applied for, on this lease, ft. None	19. Proposed depth	20. Rotary or cable tools
21. Elevations (Show whether DF, RT, GR, etc.) 5068' GR and Casinghead		22. Approx. date work will start April 1, 1991

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement

Arrow Mud proposes to plug and abandon zones below 5300' and convert to salt water disposal well in the Gr. River Fm as follows (Refer to UIC Form 1):

1. Set 5" plug at 9750' (45' into 5" liner) and cap with 2 sks cement; 22' plug
2. Set 7 5/8" CIBP at 8000' and cap with 2 sks cement; 8' plug
3. Pressure test casing to 1250 psi;
4. Set 200' cement plug from 6000' to 6200';
5. Set 7 5/8" CIBP at 5315' and cap with 2 sks cement; 8' plug
6. Pressure test casing to 1250 psi to comply with R615-5-5-2;
7. Run CBL from PBD to 4500' and perf 4 spf 90° phasing the Gr. River Fm. in the following intervals from old KB: 5255-63'; 5194'-5226'; 5155-60'; 5120-40'; 5018-44' (Refer to open hole logs on file or excerpts filed with UIC Form 1)
8. Run packer on end of 2 7/8" tubing to 5000';
9. Pressure test casing-tubing annulus above packer to 1250 psi to comply with R615-5-5-3.1.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any. David L. Allin is appointed Agent to Arrow Mud by: Frank Arrowchis

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: David L. Allin

Title: Petroleum Consultant

Date: March 18, 1992

(This space for Federal or State office use)

Federal Approval of this
API NO. Action is Necessary

Approved by: Attached Conditions.
Conditions of approval, if any:

Accepted by the State
of Utah Division of
Oil, Gas and Mining

Date: 12-7-92

By: Frank Arrowchis

as attached conditions

RECEIVED

NOV 02 1992

DIVISION OF
OIL, GAS & MINING

Utah Division of Oil, Gas and Mining

Attachment to Application for Permit to Plug Back
received November 2, 1992

Subject: Request of Arrow Mud c/o David L. Allin, for permission to plug back well and convert to disposal.

Conditions of Approval:

- 1) Since this well is located on Indian surface and minerals, primacy for injection approval resides with the EPA, Region VIII. Approval must be attained from that office prior to commencement of injection.
- 2) Fluid between plugs will be a noncorrosive fluid of sufficient density to prevent migration of fluid from zone to zone.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Annual Status Report

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL ☒ GAS ☐ OTHER:

2. Name of Operator:

Arrow Mud c/o David L. Allin

3. Address and Telephone Number:

660 North Columbus Street, SLC, UT 84103-2117 801-521-0215

4. Location of Well

Footages: 1522' FEL, 735' FNL

QQ, Sec., T., R., M.: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 14, T 2 S, R 1 E, USM

5. Lease Designation and Serial Number:

None

6. If Indian, Allottee or Tribe Name:

Ute Tribe

7. Unit Agreement Name:

None

8. Well Name and Number:

Ute SWD 1-14B1E

9. API Well Number:

43-047-30774

10. Field and Pool, or Wildcat:

Bluebell East

County: Uintah

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT

(Submit in Duplicate)

- | | |
|--|---|
| <input type="checkbox"/> Abandonment | <input type="checkbox"/> New Construction |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans | <input type="checkbox"/> Recompletion |
| <input type="checkbox"/> Conversion to Injection | <input type="checkbox"/> Shoot or Acidize |
| <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Vent or Flare |
| <input type="checkbox"/> Multiple Completion | <input type="checkbox"/> Water Shut-Off |
| <input type="checkbox"/> Other _____ | |

Approximate date work will start _____

SUBSEQUENT REPORT

(Submit Original Form Only)

- | | |
|--|---|
| <input type="checkbox"/> Abandonment * | <input type="checkbox"/> New Construction |
| <input type="checkbox"/> Casing Repair | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans | <input type="checkbox"/> Shoot or Acidize |
| <input type="checkbox"/> Conversion to Injection | <input type="checkbox"/> Vent or Flare |
| <input type="checkbox"/> Fracture Treat | <input type="checkbox"/> Water Shut-Off |
| <input checked="" type="checkbox"/> Other <u>Annual Status Report for shut in well</u> | |

Date of work completion _____

Report results of **Multiple Completions** and **Recompletions** to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This well has been shut in for several years and did not produce any oil, gas, or water during 1992. Upon approval of a recently submitted EPA UIC permit this well will be worked over and converted to salt water and industrial, nonhazardous waste disposal use. If the permit is not approved by early 1993, the well will likely be plugged and abandoned.

RECEIVED

DEC 17 1992

DIVISION OF
OIL GAS & MINING

13.

Name & Signature: David L. Allin

Title: Agent for Arrow Mud

Date: Dec 14, 1992

(This space for State use only)

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

NOTICE OF SIGNIFICANT AMENDMENTS TO EPA UIC PERMIT APPLICATION FILED
APPLICATION FOR INJECTION WELL - UIC FORM 1 WITH EPA REGION VII MARCH 4, 1993
(EPA will copy DOG&M)
EPA Permit Application UT1645-03728

OPERATOR Arrow Mud c/o David L. Allin
ADDRESS 660 N. Columbus Street
Salt Lake City, UT 84103-2117

ADDRESS CHANGE

Page Exxon Ute Tribal 1-14B1E

Well name and number: (To be changed upon approval to Ute SWD 1-14B1E)

Field or Unit name: Bluebell East Surface & Minerals
Lease no. Ute Tribe

Well location: QQNWNE section 14 township 2 S range 1 E county Uintah

Is this application for expansion of an existing project? . . . Yes ☐ No ☒

Will the proposed well be used for: Enhanced Recovery? . . . Yes ☐ No ☒

EPA Class I Type I and Disposal? Yes ☒ No ☐

Class II Type D Storage? Yes ☐ No ☒

Is this application for a new well to be drilled? Yes ☐ No ☒

If this application is for an existing well,
has a casing test been performed on the well? Yes ☐ No ☒

Date of test: Tests planned in APD

API number: 43-047-30774

Proposed injection interval: Douglas Creek Member Green River Formation
from 8186' to 8483'

Proposed maximum injection: rate 10 BPM pressure 1250 psig

Proposed injection zone contains ☒ oil, ☒ gas, and/or ☐ fresh water within 1/2
mile of the well. Depleted production zone

IMPORTANT: Additional information as required by R615-5-2 should
accompany this form.

List of Attachments: Amended APD and various amended attachments
filed with EPA Form 4 UIC.

I certify that this report is true and complete to the best of my knowledge.

Name David L. Allin

Signature David L. Allin

Title Agent for Arrow Mud

Date March 31, 1993

Phone No. (801) 521-0215

(State use only)

Application approved by _____

Title _____

Approval Date _____

RECEIVED

MAR 31 1993

Comments:

DIVISION OF
OIL GAS & MINING

Form 3160-5
(June 1990)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.

None

6. If Indian, Allottee or Tribe Name

Ute Tribe

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Arrow Mud (Agent: David L. Allin 801-521-0215)

3. Address and Telephone No. (Agent: 660 N Columbus St SLC, UT 84103-2117)

P. O. Box 127 Whiterocks, UT 84085 801-353-4378

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1522' FEL 735' FNL (NW $\frac{1}{4}$ NE $\frac{1}{4}$) Sec. 14, T2S, R1E, USM

8. Well Name and No. Page Exxon

Ute Tribal 1-14B1E

9. API Well No.

43-047-30774

10. Field and Pool, or Exploratory Area

Bluebell East

11. County or Parish, State

Uintah, Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment☐ Recompletion☒ Plugging Back☐ Casing Repair☐ Altering Casing☐ Other☐ Change of Plans☐ New Construction☐ Non-Routine Fracturing☐ Water Shut-Off☐ Conversion to Injection☒ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Arrow Mud proposes to plug and abandon zones in the Wasatch Formation below ' and convert well to dispose of produced fluid and nonhazardous industrial waste below USDW's in the Douglas Creek Member of the Green River Formation. The work will begin upon approval of the EPA Region VIII possibly by June, 1993 and will be performed as follows:

1. Set 7 5/8" CIBP at 9105' (600' above top of 5" liner) and cap with two sacks of neat cement (well to be filled with brine);
2. Pressure test 7 5/8" casing to 1250 psi and conduct remedial work if necessary;
3. Run packer on end of 2 7/8" tubing to 8150' and set;
4. Pressure test casing-tubing annulus above tubing packer to 1250 psi and conduct remedial work if necessary;
5. Fill casing-tubing annulus above tubing packer with fresh water treated for oxygen, bacteria, and scale;
6. Nipple up wellhead and begin injection testing;
7. Prepare and submit stimulation plan if warranted.

14. I hereby certify that the foregoing is true and correct

Signed

David L. Allin
Agent for Arrow Mud

Date March 4, 1993

(This space for Federal or State office use)

Approved by

Conditions of approval, if any:

Title

Date

MAR 31 1993

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States and to the public any fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

DIVISION OF
OIL GAS & MINING

Form 4 UIC	EPA UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT APPLICATION (Collected under the authority of the Safe Drinking Water Act, Sections 1421, 1422, 40 CFR 144)	I. EPA ID NUMBER UT1645-03728	
READ ATTACHED INSTRUCTIONS BEFORE STARTING FOR OFFICIAL USE ONLY			
Application approved mo day year		Date Received mo day year	
Permit/Well Number Page Exxon Ute Tribal 1-14B1E		Comments Post conversion name to be Ute SWD 1-14B1E	
II. FACILITY NAME AND ADDRESS Facility Name Ute Salt Water Disposal-Greater Altamont Field Street Address c/o David L. Allin 660 N Columbus Street City Salt Lake City		III. OWNER/OPERATOR AND ADDRESS Owner/Operator Name Arrow Mud Street Address P. O. Box 127 City Whiterocks State UT	
State UT		ZIP Code 84103-2117	
IV. OWNERSHIP STATUS (Mark 'x') <input type="checkbox"/> A. Federal <input type="checkbox"/> B. State <input type="checkbox"/> C. Private <input type="checkbox"/> D. Public <input checked="" type="checkbox"/> E. Other (Explain) Native American Private/Ute Indian Tribe		V. SIC CODES 1311	
VI. WELL STATUS (Mark 'x') <input type="checkbox"/> A. Operating Date Started mo day year <input checked="" type="checkbox"/> B. Modification/Conversion <input type="checkbox"/> C. Proposed See USDO/BLM Sundry Notice copy (Form 3160-5) attached.			
VII. TYPE OF PERMIT REQUESTED (Mark 'x' and specify if required) <input checked="" type="checkbox"/> A. Individual <input type="checkbox"/> B. Area Number of Existing wells One Number of Proposed wells One Name(s) of field(s) or project(s) Bludbell East			
VIII. CLASS AND TYPE OF WELL (see reverse) A. Class(es) (enter code(s)) Class I Class II B. Type(s) (enter code(s)) Type I Type D C. If class is "other" or type is code 'x,' explain D. Number of wells per type (if area permit)			
IX. LOCATION OF WELL(S) OR APPROXIMATE CENTER OF FIELD OR PROJECT A. Latitude Deg Min Sec 1 B. Longitude Deg Min Sec 2S 1E 14 NE Township and Range Sec 1/4 Sec 1522 Line E Feet from 735 Line N X. INDIAN LANDS (Mark 'x') <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
XI. ATTACHMENTS (Complete the following questions on a separate sheet(s) and number accordingly; see instructions) FOR CLASSES I, II, III (and other classes) complete and submit on separate sheet(s) Attachments A — U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application: Attachments A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, U, BLM Sundry Notice			
XII. CERTIFICATION I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)			
A. Name and Title (Type or Print) Frank Arrowchis, Proprietor		B. Phone No. (Area Code and No.) 801-353-4378/521-0215	
C. Signature Frank Arrowchis		D. Date Signed/Amended March 4, 1993	
Amendment filed by David L. Allin, Agent		MAR 3 1993	

ATTACHMENT D
FORM 4 UIC

Within the area of review there is one formation other than recent alluvial gravels that qualifies as an underground source of drinking water. The formation is the Eocene to Oligocene Duchesne River formation. As depicted in Figure D-3, the Duchesne River formation occurs at or very near the surface and extends to as much as 1,200' below the surface. This formation and contained aquifers are usable as USDW since the water therein contains less than 3,000 mg/l dissolved solids.

It is apparent from Figure D-3 that the proposed injection zones in the Douglas Creek Member of the Green River Formation are far deeper than any potential USDW's. The zones are in fact 7,000-7,500' below any current USDW.

The proposed injection zone will have no effective communication with any USDW and it is beneath the recognized base of moderately saline waters in overlying aquifers as depicted by Figure D-2 (see explanation presented herewith as Figure D-1).

Figures D-1 and D-2 are from USGS Open File Report 87-397. The water quality zone contours are drawn on the base of moderately saline water (3,000 to 10,000 mg/l dissolved solids) as recognized in deep wells through interpretation of geophysical logs. This surface is also the top of brine in the subsurface. The proposed injection zones are beneath the top of brine not only as interpreted from the map (Figure D-2) but also as determined from samples of water recovered on a DST in the 1-14B1E well.

USGS Open File Report 87-397 reiterated previous interpretations that the Uinta Basin is likely a ground water basin of internal drainage with a possible deep outlet near the axis of the basin near the western edge of the basin somewhere between the San Rafael Swell and the Wasatch Plateau. If the contours of Figure D-2 are interpreted as a potentiometric surface for groundwater of similar quality in communication, it becomes apparent that the basin is indeed internally drained. Basic hydrological interpretation of ground water movement based upon the potentiometric surface theory is indicated by arrows normal to the contours in Figure D-2. There should be a strong sweep westerly then northward from the proposed injection site carrying injected fluids deep into the basin center.

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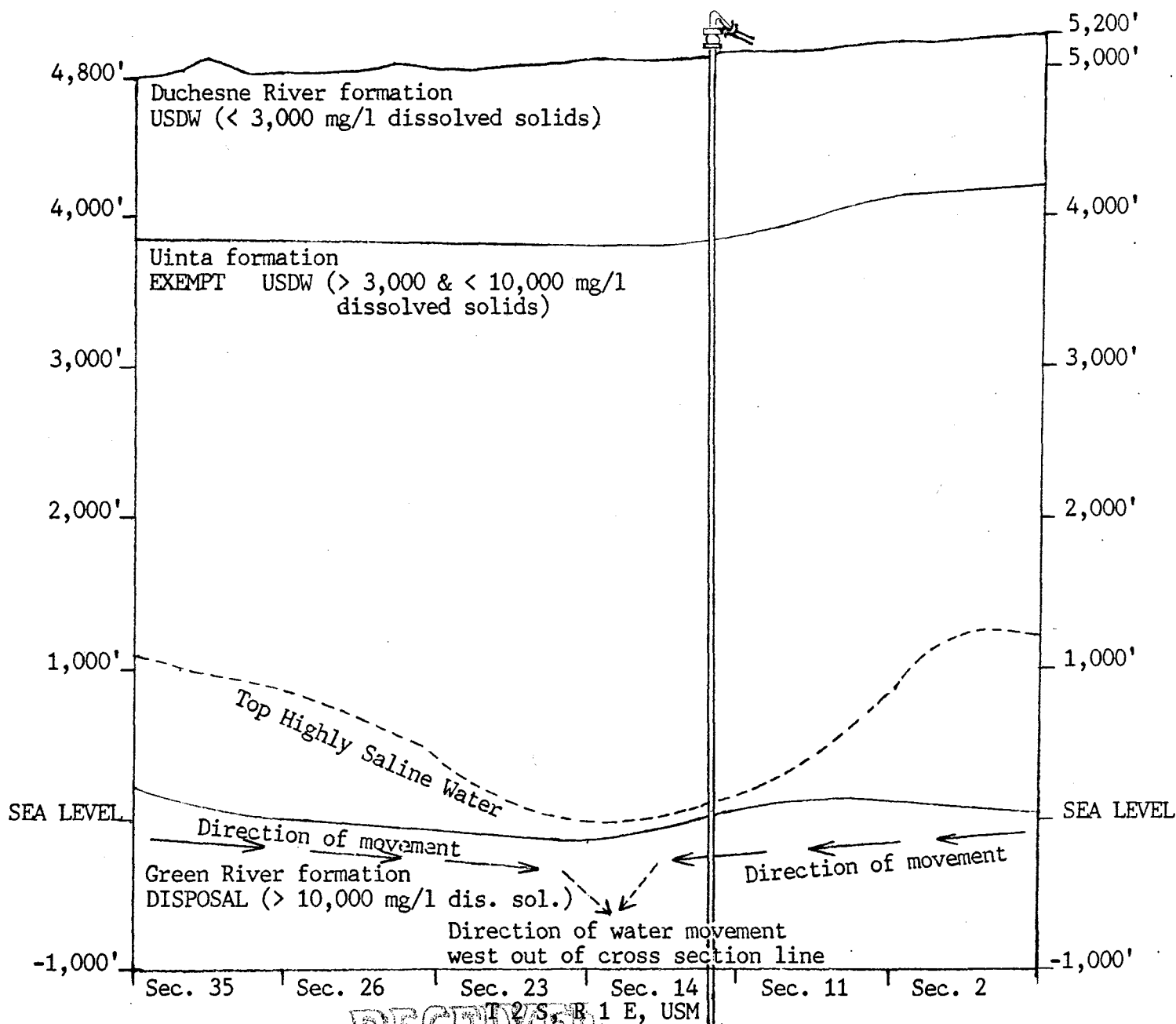
DIVISION OF
OIL GAS & MINING

FIGURE D-3

A
South

A'
North

1-14B1E Well



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OIL GAS & MINING

Proposed injection zones
between 8,186 and 8,483'.
Elevations 3,105-3,402'
BELOW SEA LEVEL.

ATTACHMENT F
FORM 4 UIC

The regional geologic setting is depicted by Figures F-1-3 in the Uinta Basin. The cross section (Figure F-2) indicates the proposed injection zone in the marginal lacustrine facies (Douglas Cr. Mbr. Green Rv. Fm. From the cross section, it is apparent how the south limb recharge area produces down-dip flow into the aquifers of the Uinta Basin, but it is important to note that the strongest recharge is into the north limb from the Uinta Mountains. The two flow vectors converge in the basin axis area and flow down dip and west deeper into the basin to an internal outlet.

Figure F-4 depicts the structural geology of the top of the Parachute Creek member of the Green River formation. Note that the top of the brine is above the elevation of the proposed injection zone. The injection zones are tuffaceous sandstones encased in shales near the contact of the Douglas Cr. & Garden G. Mbrs, Green River formation. Further details of the lithology of these zones is presented in Attachment G.

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OIL GAS & MINING

FIGURE F-2

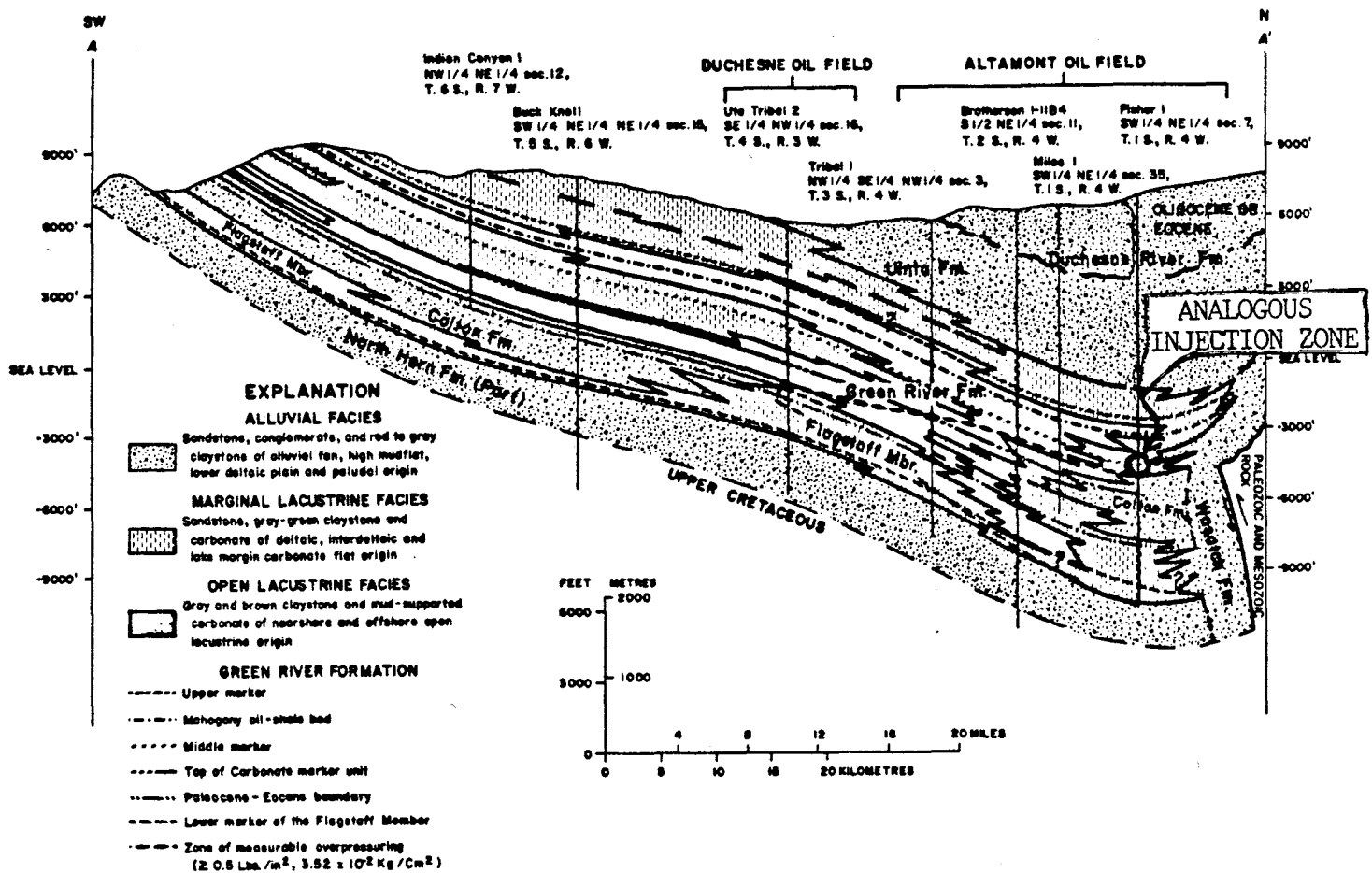


Fig. 2 — Generalized structural-stratigraphic cross section from outcrops on the southwest flank of the Uinta Basin, through Duchesne and Altamont-Bluebell oil fields, to the north-central part of the basin. Uinta Formation includes saline facies and equivalent lacustrine rocks assigned to the Uinta by Dane (1954).

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ATTACHMENT G
FORM 4 UIC

The geophysical logs produced from the 1-14B1E well upon drilling in late 1980 provide base data on the radioactive, electrical, and relative density properties of the proposed injection zones. In conjunction with the drill stem test data measured on October 27, 1980, in the Horse Bench Sandstone Bed of the lowermost Uinta Formation, the log information can be utilized to interpret substantial geological data and draw conclusions concerning injection and confining zone lithology, depth, and fracture pressures.

The log excerpts are included herewith labelled Figures G-1 and G-2, and the DST data is labelled Appendix G-1. The log excerpts are embellished with the geological formation names of the proposed injection zones as well as the plot of the existing perforations in those zones above the proposed plug back depth. Depths indicated were measured from a Kelly bushing elevation of 5,081', 13' above the permanent ground level datum of 5,066'.

The proposed injection zones lie in the Douglas Creek Member of the Green River Formation of Eocene age. The Douglas Creek is composed of interbedded sandstone, gray-green claystone and carbonate of deltaic, interdeltic, and lake margin carbonate flat origin. The injection zones are more specifically light brown to white, very fine grain tuffaceous sandstone beds.

The overlying confining zone is the Garden Gulch Member of the Green River Formation. Locally the Garden Gulch is composed of dark gray to black shale derived from open lacustrine conditions prior to the deposition of the karogen so common in the oil shale sequences of the overlying Parachute Creek Member of the Green River Formation. In the 1-14B1E well the Garden Gulch was 2,014' thick.

The first submittal for this attachment indicated a calculated fracture reopening pressure for the Horse Bench Sandstone Bed at 5,022' of 4,798 psi and the same figure for the confining, interbedded shales was 10% higher. The Douglas Creek Member zones proposed for injection herewith lie some 3,200' deeper and have substantially higher fracture reopening pressures. When the operator of the 1-14B1E artificially fractured the Douglas Creek perforations from 8,186-8483' on July 14, 1983, the formation broke down at 7,500 psi. The lowest treatment pressure reached that day was 6,800 psi. This latter figure probably represents the fracture reopening pressure in those zones.

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OIL GAS & MINING

ATTACHMENT H
FORM 4 UIC

The average daily rate of fluid injection is anticipated to be 5,000 barrels of produced salt water with 5 barrels of filtered industrial waste blended. The maximum daily rate will be unlikely to exceed 10,000 barrels of produced salt water blended with 20 barrels of filtered industrial waste. The average injection pressure will be 750 psi and a maximum of 1,250 psi. The annulus fluid will be fresh water treated for oxygen, bacteria, and scale.

The industrial wastes that are proposed to be disposed of by blending with oil field produced fluids are those associated with the exploration, development, production, refining, and transportation of crude oil, natural gas, or geothermal energy. These wastes are usually exempted by the EPA from regulation as hazardous materials. They can include but are not limited to drilling fluids, pipeline and tank discharges, and soiled oil or lubricants. Industrial wastes will be disposed of on a batch basis only after EPA approval based upon chemical analyses and compatibility studies. The sources of the industrial wastes will be private petroleum companies, public utilities, private industrial installations, the Ute Indian Tribe and possibly homeowners of the Vinta Basin area generated by household waste collection programs.

The bulk of the injected fluid will be water produced from oil wells within economical trucking distance of the proposed injection site. This water is typically highly saline, ranging from 7,000 to as high as 300,000 mg/L. Other than sodium chloride, the water can be of calcium chloride type or in shallower zones, of sodium bicarbonate or sodium sulfate type. The sources can vary from produced oil field fluids to drilling circulation fluids such as mud filtrate.

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OIL GAS & MINING

ATTACHMENT K
FORM 4 UIC

Produced salt water from oil wells and indust. wastes will be delivered to the proposed facility by trucks owned by Arrow Mud, other commercial truckers, and the operators equipment. Any drums or barrels will be treated as the property of waste generators and returned to them for disposal or treatment. No long term storage of any material other than in the permitted, bulk storage tanks is anticipated.

Produced water for disposal will be pumped into storage tanks to allow the separation of hydrocarbons and solid materials. The hydrocarbons will be sold and solids disposed of at an approved facility dependent upon content. Indust. wastes will be stored in a separate tank or tanks and emulsified with salt water in a blending tank just upstream from the injection pump (triplex type). Pumping of fluid into the injection well will be intermittent depending upon supply of fluid and limited in volume by the maximum approved injection pressure.

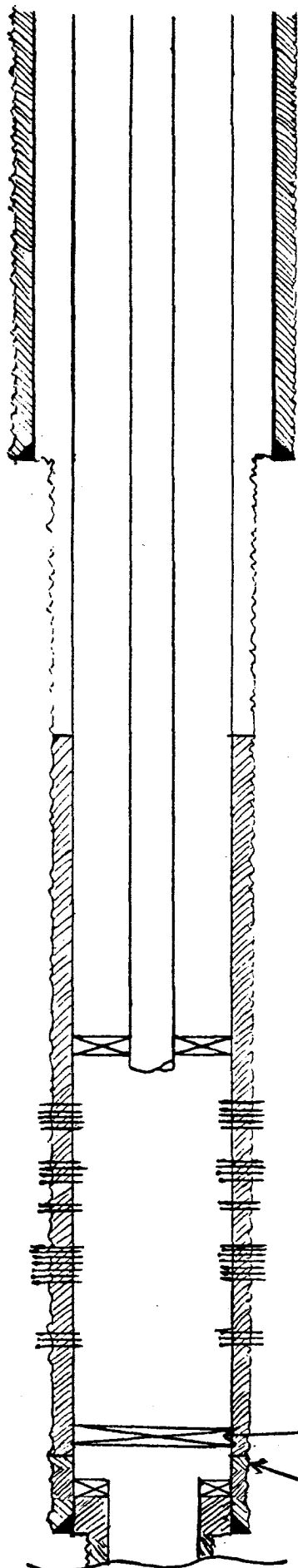
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OIL GAS & MINING

FIGURE M-1

Configuration of 1-14B1E as converted to Ute SWD 1-14B1E, Elevation KB=5,081'



10 3/4" 40.5# Surface Casing Set at 1,653' and Cemented to the Surface with 1,425 Sx Cement

2 7/8" Tubing to Packer for 7 5/8" 26.4# Production Casing Set at 8,150'

(Four shots per foot all zones measured from a Kelly bushing elevation of 5,081' ams)

8478-83', 8456-60', 8434-42', 8420-24', 8410-15',
8396-408', 8388-92', 8290-94', 8220-26', 8325-44',
8186-94', 8262-83', 8234-44', 8244-56', 8204-18'

All perforations are existing.
No new perforations are planned

Plugged Back with 7 5/8" CIBP and 2 Sx Cement (Top 9,100')

Existing Estimated Cement Top at 5,800'
7 5/8" 29.7# & 26.4# Production Casing Set at 9,910'
with 830 Sx Cement

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ATTACHMENT N
FORM 4 UIC

The injected fluid will undergo a pressure drop into the formation of variable quantity dependent upon surface pump pressure. The native fluid will be displaced by the transient injected fluid more or less evenly away from the wellbore during pumping, but at very low pump rates and during pumping cessation the inferred hydrodynamic regime in the injection zone will rapidly take over the dispersal pattern of the injected fluid.

Figures D-1, D-2, and D-3 presented with Attachment D herewith point out the inferred water flow directions in the injection zone. Although a full quantitative analysis of the hydrodynamic regime in this part of the Uinta Basin is not presented herein, it is apparent that the highly variable surface of the top of the brine depicted by Figure D-2 would result in strong subsurface formation water flow as indicated by the arrows on that figure. Another depiction of the magnitude of the head difference in the brine in the vicinity of the proposed injection well is the cross section (Figure D-3). The north and south tilts in the potentiometric surface of the brine toward the proposed injection well are more than 300' per mile. With the lack of significant structure on the injection zone, such fluid sweeps are capable of flushing away even very light hydrocarbons including natural gas.

With decreasing heads in the brine appearing to the west and ultimately to the north of the proposed injection well, it is apparent that injected fluid will follow that course into the the basin axis. Considering this information, the 1-14B1E site is particularly suited for nonhazardous industrial waste disposal.

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OIL, GAS & MINERAL



AMENDED 3-4-93

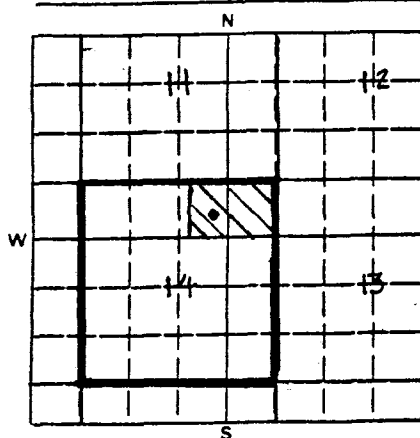
PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY (Agent)

Ute Salt Water Disposal-Greater Altamont Fld
c/o David L. Allin 660 N Columbus St
Salt Lake City, UT 84103-2117

NAME AND ADDRESS OF OWNER/OPERATOR

Arrow Mud
P. O. Box 127
Whiterocks, UT 84085

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT

STATE

Utah

COUNTY

Uintah

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

SE 1/4 OF NW 1/4 OF NE 1/4 SECTION 14 TOWNSHIP 2S RANGE 1E

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location 735 ft. from (N/S) N Line of quarter section
and 1522 ft. from (E/W) E Line of quarter section

TYPE OF AUTHORIZATION

- ☒ Individual Permit
☐ Area Permit
☐ Rul.

Number of Wells 1

WELL ACTIVITY

- ☒ CLASS I Type I
☒ CLASS II
☒ Brine Disposal (Type D)
☐ Enhanced Recovery
☐ Hydrocarbon Storage
☐ CLASS III

Lease Name Ute Tribal (no lease)

Well Number Ute SWD 1-14B1E

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
10.75	40.5		1653	14.75
7.625	26.4 & 29.7		9910	9.75
5.00	18.0 liner		11794-9705	6.75
2.875	6.5 tubing	8150	None	NA

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☒ The Balance Method for Plugs 2-6
☒ The Dump Bailer Method for Plug 1
☐ The Two-Plug Method
☐ Other

CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)	7.625	7.625	7.625	10.75	7.625	10.75	
Depth to Bottom of Tubing or Drill Pipe (ft.)	8140	6200	2200	1500	200	200	
Sacks of Cement To Be Used (each plug)	2&CIBP	50	50	50	50	50	
Slurry Volume To Be Pumped (cu. ft.)	3	53	53	53	53	53	
Calculated Top of Plug (ft.)	8134	6000	2000	1270	Surf.	Surf.	
Measured Top of Plug (if tagged ft.)	proposed						
Slurry Wt. (Lb./Gal.)	14	14	14	14	14	14	
Type Cement or Other Material (Class III)	G	G	G	G	G	G	

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (If any)

From	To	From	To
SEE ATTACHMENT Q-1			

Estimated Cost to Plug Wells
\$8000.00

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)

Amended by David L. Allin, Agent
Frank Arrowchis, Proprietor

SIGNATURE

David L. Allin
Frank Arrowchis

DATE SIGNED/Amended

March 4, 1993
March 10-92

ATTACHMENT S
FORM 4 UIC

No aquifer exemption is requested herewith. The proposed injection zone clearly contains brine of high concentration, crude oil, and natural gas, and furthermore, is not a potential USDW.

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DIVISION OF
OIL GAS & MINING

ATTACHMENT U
FORM 4 UIC

Arrow Mud is a Native American proprietorship engaged in oil field service delivery. Their primary service is water hauling utilizing a fleet of owned and leased trucks. The water hauling service is provided to both to drillers and producers of petroleum wells in the Uinta Basin region. The bulk of the water moved is produced salt water for disposal. This fluid is hauled from petroleum wells for the operator thereof to their own disposal facility or to a commercially operated facility owned by third parties.

Increasingly, the state of Utah has declined to recertify evaporation pits for use in produced water disposal. Furthermore, the state is increasingly concerned about the continued disposal of more than ten million barrels of salt water in the Duchesne River formation. This formation contains drinking water that is now utilized as an USDW in Uintah and Duchesne counties. It will be advantageous to all parties concerned to develop alternatives to continued abuse of the Duchesne River formation.

Arrow Mud wishes to vertically integrate its operations in water disposal from hauling through actual disposal. This is to be accomplished with the assistance of some experienced oil well operating personnel in partnership with the Ute Indian Tribe. The Ute Tribe is providing the 1-14B1E wellbore for the use of Arrow Mud for disposal if approved for that use, and the tribe will participate in profits earned from operations.

This project will serve to begin a program of safe water and waste disposal in the Uinta Basin and is expected to be the first of several wells to be converted for those purposes. Under Indian preference rules, the Arrow Mud facilities should be considered first for use if the costs are competitive. The goal is to provide salt water disposal for the petroleum industry of the Uinta Basin and industrial waste receptacle for the indigenous industries and population which will additionally financially benefit the native population.

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DIVISION OF
OIL GAS & MINING

Nicholas and Christiana Oprandy
HCR 67 Box 10
Ft. Duchesne, Utah 84026

May 23, 1993

U.S. Environmental Protection Agency
Region VIII, BWM-DW
UIC Implementation Section
Attn: John Carson
999 18th Street, Suite 500
Denver, Colorado 80202-2466

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MAY 25 1993

DIVISION OF
OIL GAS & MINING

Dear Mr Carson:

We would like to comment on the notice of intent for Arrow Mud to use Page Exxon Ute Tribal Well #1-14B1E (EPA Permit Application UT1645-03728) for a class I disposal well.

There are several issues/questions that we would like to have answered. The letter and application for the injection well from Allin Proprietary/ Petroleum Consulting of August 11, 1992, is asking for an EPA Class II, Type D, and an EPA Class I, Type W permit, which includes semi-hazardous wastes. In reviewing the Public Notice, by the EPA, only non-hazardous wastes are allowed for disposal. If this is the case, why is the EPA serving notice of intent to issue a Class I permit allowing for semi-hazardous wastes for disposal? A Class II permit would seem to allow for the disposal of non-hazardous waste that would be associated with the local needs.

We would like to know exactly what types and catagories (non-hazardous, semi-hazardpus or hazardous) of waste products will be disposed of at this site if the permit is approved?.

If it is deemed necessary to dispose of semi-hazardous waste such as anti-freeze, used motor oil, etc., why couldn't these be recycled at various facilities in Salt Lake City or Denver? If shipping costs are the issue in recycling, then in comparison what are the costs associated in reestablishing the well (drilling, new casing, cementing, etc.), installing the injection system, and then maintaining and monitoring the integrity of the site.

Our main concerns come from the facts that we live and farm approximately 1/2 mile southwest of the well site; a main irrigation canal (servicing several farmers in the area for irrigation and livestock needs) is within several hundred feet south of the well site; and the Uinta River, west of the well site, is also used for irrigation, livestock and wildlife purposes. Because of these important considerations what precautions will be taken before disposal to protect ground and surface waters from leakage

or spills. An immediate thought that comes to mind, is of a spill getting into the irrigation water and getting into the soil and crops. This brings up another question of whether there will be a containment facility around the site and what are the mop-up procedures to insure no groundwater or irrigation water contamination?

Lastly what monitoring procedures and compliance regulations will be instituted to insure that disposal techniques are used and followed? We understand that vertical fracturing of formations are possible if improper injection and/or overloading of a zone takes place, thus contaminating other formations. Also problems can be caused by substances closing off pore spaces in the rock. Are there methods to prevent these problems from occurring or monitoring techniques that would show this occurring?

In closing we feel that this alternative should only be used after exhausting other possibilities such as recycling, evaporative techniques or incineration. We look forward to your response to our questions and concerns before a final decision is made. If these questions can not be answered to our satisfaction we would like a public hearing for further clarification.

Sincerely,

Nicholas & Christiana Oprandy

cc: Gil Hunt
Utah Board of Oil, Gas and Mining

cc: David Allin
Consultant to Arrow Mud



State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

RECEIVED

MAY 27 1993

DIVISION OF
OIL GAS & MINING

Michael O. Leavitt

Governor

Dianne R. Nielson, Ph.D.

Executive Director

Don A. Ostler, P.E.

Director

288 North 1460 West

P.O. Box 144870

Salt Lake City, Utah 84114-4870

(801) 538-6146

(801) 538-6016 Fax

(801) 536-4414 T.D.D.

May 24, 1993

CERTIFIED MAIL

(Return Receipt Requested)

Max H. Dodson, Director
Water Management Division
U. S. EPA, Region VIII
999 18th Street - Suite 500
Denver, Colorado 80202-2466

RE: Utah Comments on EPA Draft Permit
No. UT1645-03728 for a Class I Non-
Hazardous Waste Injection Well (Arrow
Mud)

Dear Mr. Dodson:

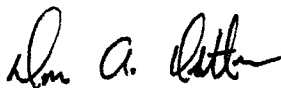
Thank you for providing us with a copy of the above-referenced draft permit for Arrow Mud. We realize that the proposed facility is located on Indian Trust Lands, and therefore EPA has sole UIC Class I permitting authority. However, due to the proximity of fee land ($\approx 1/4$ mile, within the $1/2$ mile radius EPA area of review for this project) and the possibility that contiguous aquifers off the Reservation may be affected by disposal practices at the site, we have reviewed the draft permit and have some major concerns as itemized in the attachment for inclusion as part of the formal record. Because of these issues and the fact this is one of the few proposed Class I injection wells in the State of Utah, which has major policy implications, we are hereby requesting a public hearing in accordance with 40 CFR 124.11.

Max H. Dodson
Page 2
May 24, 1993

Please do not consider the above as an objection to the project but only as an attempt to ensure waste disposal activities throughout the state provide for adequate protection of public health and the environment.

Sincerely,

Utah Water Quality Board



Don A. Ostler, P.E.
Executive Secretary

Enclosure

DAO:JJ:gt

cc: Dianne Nielson, Executive Director, DEQ
Joseph Shaffer, Uintah Basin District Health Dept.
Ted Allen, District Engineer
Dan Jackson, EPA Region VIII
John Carson, EPA Region VIII
Utah Division of Oil, Gas and Mining
Utah Division of Solid and Hazardous Waste
Utah Attorney General's Office
Duchesne County Commission
Jack Wood, Duchesne County Planning and Zoning Director
Ute Tribe

P:ARROWMUD.PA
File:Arrow Mud Class I Non-hazardous Injection Well

Arrow Mud Utah Comments on EPA Draft Permit No. UT1645-03728 for a Class I Non-Hazardous Waste Injection Well (Arrow Mud):

1. We disagree with the assertion in the Statement of Basis that "All deeper formations are expected to contain waters with similar or greater TDS values" (referring to 14,000 mg/l). Based upon Utah Dept. of Natural Resources/U.S. Geological Survey Technical Publication No. 92 (Base of Moderately Saline Ground Water in the Uintah Basin, Utah), it appears that there is an aquifer containing less than 10,000 mg/l TDS below the proposed injection zone throughout the area, making it an USDW. As such the well could not now be defined as a Class I [see 40 CFR 144.6 (a)(2)], and would require special consideration of ways to protect the lower USDW.
2. The Statement of Basis indicates that the draft permit was written without knowing the injection zone static pressure or having an analysis (esp. TDS) of the injection zone formation fluids. The draft permit does require that these factors be determined prior to commencing injection, but that is too late to be used in permit drafting decisions (i.e., defining the area of review, delineating USDW's).

The injection zone static pressure could be an important factor in determining the appropriate area of review [re: 40 CFR 146.6 (a)], and the injection zone TDS must be known in order to determine if a USDW is present there. In light of DNR/USGS Technical Publication No. 92 and many currently produced waters with less than 10,000 mg/l TDS, it should not be assumed that the TDS of formation fluids constantly increases with depth. A draft permit should not be written without knowing the status of these two key factors.

3. The draft permit did not require any USDW monitoring. It would seem prudent to require some USDW monitoring (background and post-injection) in order to determine whether injectate or formation fluids were in fact getting past the confining zone(s) or well casing above the confining zone(s). USDW monitoring should be a permit requirement, with analyzed parameters reflecting injectate contaminants.
4. The draft permit utilizes a 1/2 mile radius area of review in contrast with Utah's 2 mile radius area of review requirement. Two temporarily abandoned and two permanently abandoned oil wells within the 2 mile radius appear to be perforated in the injection zone, and should be investigated for proper construction and abandonment relative to USDW protection.

We request that you expand your area of review to at least a 2 mile radius, to accommodate the concerns of the State of Utah. If unable to do so, please indicate the factors considered by EPA in choosing the 1/2 mile area of review by addressing 40 CFR 146.6 (b) and the injection zone static pressure comments in Item 2 above.

5. The draft permit allows injection liquid to be used as the annular fluid during the tubing/casing annulus pressure test. It is our position that this is inappropriate in that a casing failure could allow the contamination of a USDW by Class I fluids.
6. The draft permit allows injection to continue for up to 30 days after mechanical integrity failure "when it is demonstrated that no endangerment to the USDW's is present." How can USDW endangerment potential be known without an investigation, and how can an investigation be carried out if injection is allowed to continue? MIT failure should result in immediate cessation of injection activities until the problem is resolved and a follow-up MIT is satisfactory.
7. There should be an operational requirement that annular pressure changes in excess (plus or minus) of a certain percentage (i.e., 10%, etc.) of normal are grounds for stopping injection and running an annular pressure test.
8. The draft permit allows an unlimited injection flow rate and unlimited cumulative volume of injected fluid as long as the maximum allowable injection pressure is not exceeded. This determination should not be made without first considering its effect on the area of review as calculated in 40 CFR 146.6 (a).
9. The plugging and abandonment plan does not appear to adequately isolate the injection zone. We recommend a cement plug be placed inside the 7 5/8" long string casing across the whole injection zone. Polymer-free bentonitic mud or the equivalent should be the filler between plugs.
10. It is not clear that \$8,000 is adequate to properly plug and abandon (P&A) the well. The number seems low for costs which include removing tubing/packer, installation of a cast iron bridge plug, two squeeze jobs, equipment /pipe rental, cement and mud costs, labor and transportation costs, etc. Additional cementing of the injection zone as recommended in Item 9 above would also increase the P&A cost.
11. In order to assure that a generator does not send hazardous waste for injection, a quality assurance plan that involves random waste sampling/analysis of all types of wastes accepted by the permittee should be developed and submitted to the Director for approval.
12. It appears that descriptions and analyses of the potential Class I Non-hazardous injectates are not presently available, as the draft permit did not specifically identify them. The compatibility evaluations required by 40 CFR 146.14(b)(6) can not be made unless analyses of representative waste samples are available.

ALLIN PROPRIETARY

DAVID L. ALLIN, CERTIFIED PETROLEUM GEOLOGIST # 2934, A.A.P.G.
660 NORTH COLUMBUS STREET, SLC, UT 84103 U.S.A. (801) 521-0215

June 4, 1993

Mr. John Carson
United States Environmental Protection Agency
Region VIII
999 18th Street, Suite 500
Denver, CO 80202-2466

Re: Ute 1-14B1E EPA #UT1645-03728

Dear Mr. Carson:

It has come to my attention that Arrow Mud has a conflict in its lease with the Ute Indian Tribe which will not allow operation of the 1-14B1E under EPA Class I of any type. This is as much of a surprise to me as anyone involved with this project since written notification was sent to all concerned parties via a letter dated December 29, 1992. Please terminate the Class I, Type I application immediately and, if compliance with regulations is assured, approve the application for use under Class II, Type D. Arrow Mud will diligently pursue its application for that classification with the Utah Division of Oil, Gas & Mining as well.

Since there are no technical reasons that the well cannot be operated for Class I, Type I use, please retain all materials now in your possession for the application for later use. The State of Utah has voiced some concerns relative to the conversion of subject well which can be mitigated even though they are not significant. It is important to note that the concerns brought up by the State were developed to defeat the Genesis application and are not germane to the location of the 1-14B1E. Their letter of May 24, 1993 even copied the Duchesne County Commission and the 1-14B1E is located in Uintah County.

Thankyou for all of your efforts and those of your coworkers relative to this application. If Arrow Mud can resolve its lease conflict, it will reapply for Class I, Type I use, so none of our work will be wasted. The 1-14B1E is an ideal site for dual classification use and such sites are mighty rare indeed. For the present, Arrow Mud will look forward to disposing of produced fluids after a one year delay.

Sincerely yours,
David L. Allin
David L. Allin
Agent for Arrow Mud

DLA/tc

cc: Frank Arrowchis
Ute Indian Tribe
Utah Division of Oil Gas & Mining
Perry D. Baker
Rob Thompson, Esq.
H. K. Elrod
David H. James

RECEIVED

JUN 04 1993

DIVISION OF
OIL GAS & MINING

ALLIN PROPRIETARY

DAVID L. ALLIN, CERTIFIED PETROLEUM GEOLOGIST # 2934, A.A.P.G.
660 NORTH COLUMBUS STREET, SLC, UT 84103 U.S.A. (801) 521-0215

October 1, 1993

John A. Carson
U. S. Environmental Protection Agency
Region VIII
Denver Place, Suite 500 (8WM-DW)
999 18th Street
Denver, CO 80202-2466

RECEIVED

OCT 04 1993

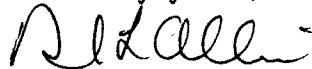
DIVISION OF
OIL, GAS & MINING

Re: Arrow Mud UIC Class I Permit Application Reinstatement
Ute #1-14B1E (Formerly Page Exxon Ute Tribal 1-14B1E)
Class II Permit No. UT1645-03728
Uintah County, Utah

Dear Mr. Carson:

Arrow Mud and the Ute Indian Tribe have amended Business Lease No. 6562 to allow the Ute #1-14B1E well to be used for purposes allowed under an EPA Class I Type I Permit (disposal of nonhazardous industrial wastes). Under these circumstances, Arrow Mud wishes to respectfully request that the Draft Class I Underground Injection Control Permit issued under the April 21, 1993 date be reconsidered for approval as soon as possible.

Sincerely yours,



David L. Allin
Agent for Arrow Mud

DLA/tc

cc: Frank Arrowchis, Proprietor
Arrow Mud

Stewart Pike, Chairman
Ute Indian Tribe

Ferron Secakuku, Petroleum Engineer
Ute Indian Tribe

Lena D. Sixkiller, President
Ute Distribution Corporation

Rob Thompson, Esq., Counsel
Ute Indian Tribe

Don Ostler, Exective Secretary
Utah DEQ
Division of Water Quality

Gilbert Hunt
Utah DNR
Division of Oil, Gas and Mining

Mr. Carson.

Page Two

Dennis Downs, Executive Secretary
Utah DEQ
Division of Solid and Hazardous Waste

Norman Cambridge
Bureau of Indian Affairs

David H. James, President
Western Operating Company

AFFIDAVIT OF PUBLICATION

NOTICE
OF
AGENCY
ACTION

CAUSE NO. UIC-140
IN THE MATTER OF
THE APPLICATION OF
COASTAL OIL & GAS
CORPORATION FOR
ADMINISTRATIVE
APPROVAL OF THE
TEW 1-9B5 WELL LO-
CATED IN SECTION 9,
TOWNSHIP 2 SOUTH,
RANGE 5 WEST,
U.S.M., DUCHESNE
COUNTY, UTAH, AS A
CLASS II INJECTION
WELL

THE STATE OF
UTAH TO ALL PER-
SONS INTERESTED IN
THE ABOVE EN-
TITLED MATTER.

Notice is hereby given
that the Division is com-
mencing an informal ad-
judicative proceeding to
consider the application
of Coastal Oil & Gas Cor-
poration for administra-
tive approval of the TEW
19B5 Well, located in
Section 9, Township 2
South, Range 5 West,
Duchesne County, Utah,
for conversion to a Class
II injection well. The pro-
ceeding will be conducted
in accordance with Utah
Admin. R.649-10, Ad-
ministrative Procedures.

The interval from
3700 feet to 6400 feet
(Lower Uinta, Upper
Green River Formation)
will be selectively perfor-
ated for water injection.
The average injection
pressure is estimated to
be 500 psig and the esti-
mated injection volume
will be 10,000 barrels of
water per day.

Any person desiring
to object to the applica-
tion or otherwise inter-
vene in the proceeding,
must file a written pro-
test or notice of interven-
tion with the Division
within fifteen days fol-
lowing publication of this
notice. If such a protest
or notice of intervention
is received, a hearing will
be scheduled before the
Board of Oil, Gas and
Mining. Protestants and/
or intervenors should be
prepared to demonstrate
at the hearing how this
matter affects their inter-
ests.

DATED this 15th day
of December, 1993
Published in the Uintah
Basin Standard Decem-
ber 21, 1993

County of Duchesne,

STATE OF UTAH

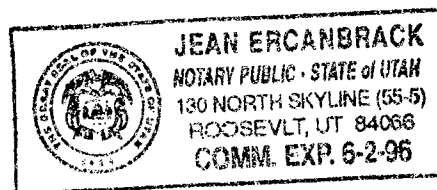
I, Craig L. Ashby on oath, say that I am the
PUBLISHER of the Uintah Basin Standard, a weekly
newspaper of general circulation, published at
Roosevelt, State and County aforesaid, and that a certain
notice, a true copy of which is hereto attached, was
published in the full issue of such newspaper
for 1 consecutive issues, and that the first
publication was on the 21 day of Dec,
1993, and that the last publication of such notice was
in the issue of such newspaper dated the 21 day
of Dec, 1993

Subscribed and sworn to before me this

23 day of Dec, 1993

Jean Ercanbrack

Notary Public



ALLIN PROPRIETARY

DAVID L. ALLIN, CERTIFIED PETROLEUM GEOLOGIST # 2934, A.A.P.G.
660 NORTH COLUMBUS STREET, SLC, UT 84103 U.S.A.

(801) 521-0215

January 4, 1994

John A. Carson
U. S. Environmental Protection Agency
Region VIII
Denver Place, Suite 500 (8WM-DW)
999 18th Street
Denver, CO 80202-2466

RECEIVED

JAN 06 1994

DIVISION OF
OIL, GAS & MINING

Re: Arrow Mud UIC Class I Permit Application
Ute SWD #1-14B1E (Formerly Page Exxon Ute Tribal 1-14B1E)
Class II Permit No. UT1645-03728
Uintah County, Utah

Dear Mr. Carson:

Thankyou for your call late last year to alert me to the recasting of the above referenced permit application as a Class V. It is the prerogative of the EPA to classify the well with an appropriate permit, but I found the reasoning for the proposed reclassification disturbing. My client, Arrow Mud, proposed conversion of the Ute SWD 1-14B1E for the uses allowed under a Class I Type I permit specifically because the site and well were successfully screened from literally hundreds of candidate wells and locations. Obviously, the presence of a potential USDW beneath the proposed injection zone was considered carefully as a negative criteria for selection. Injection of any type of fluid above a potential USDW is an extremely sensitive issue. Therefore, I wish to request on behalf of the applicant that any references to an underlying potential USDW be stricken from the draft and final permit and that such permit be Class I Type I unless other circumstances preclude issuance of a permit in that class.

It is my contention that the Ute SWD 1-14B1E site and in fact at least a several mile radius surrounding it contains no potential USDW's below the proposed injection zone in the Douglas Creek Member of the Green River Formation. I believe that there is sufficient physical evidence to prove that contention as a point of fact to the satisfaction of your agency and the Utah DEQ Division of Water Quality. One source of information that led me to my conclusion originally was the U. S. Geological Survey Publication entitled "General Hydrogeology of the Aquifers of Mesozoic Age, Upper Colorado River Basin-Excluding the San Juan Basin-Colorado, Utah Wyoming, and Arizona" (Atlas HA-698) by Freethy, etal published in 1988. I have included herewith copies of extracts from that publication which depict the dissolved-solids concentrations in the Jurassic Glen Canyon Group and the Cretaceous Mesaverde Group sediments (Figures 19-20).

I have plotted the location of the Ute SWD 1-14B1E well on the extracts from Figures 19 and 20. It appears that the wellsite falls very close to 10,000 mg/l total dissolved-solids (TDS) contour in the northern flank of the Uinta Basin. This is misleading since these aquifers do not communicate between the north and south limbs of the basin. The TDS content of water in these Mesozoic hydrogeologic units increases from their outcrops to the south and southeast of the basin center with depth to the north until they are cut off by the fault bounding the south flank of the Uinta Mountains. The counterparts of the Mesozoic hydrogeologic units on the north flank of the Uinta Basin contain substantially lower concentrations of TDS since they are steeply dipping and are very near their recharge areas. The units actually communicate with portions of the Tertiary Duchesne River Formation down through the Wasatch Formation across the Uinta Mountain south flank fault system. I have added a rough depiction of the location of the Uinta Mountain south flank fault to Figures 19 and 20. My original submission for the UIC Permit Application included Figures F-2 and F-3 which depict the Uinta Mountain south flank fault as well.

As additional evidence that no formations below the proposed injection zone could qualify as potential USDW's I have put together a copy of an extract from Plates 1 and 2 of the State of Utah Department of

Mr. Carson
Page Two

Natural Resources Technical Publication No. 92 entitled "Base of Moderately Saline Ground Water in the Uinta Basin, Utah" which has been noted with locations of wells from which TDS data are available. I wish to thank Mr. Gil Hunt of the Utah Division of Oil, Gas, and Mining for providing me with access to his copy of the original water analysis data that was used to compile the plates in Technical Publication No. 92. The data points indicate a TDS figure and the tested formation.

Since the hydrogeologic units underlying the Green River Formation other than the Wasatch Formation occur at such great depths from the surface, no direct sampling of their water chemistry has been possible in the immediate vicinity of the Ute SWD 1-14B1E. I have chosen to provide sample data from the upslope areas of the potentiometric surfaces for these units. I assume that the TDS can only increase with depth, northward toward the proposed injection site and on into the Uinta Mountain south flank fault, so the data provided can be considered minima with respect to the subsurface of the proposed injection site. In the subsurface of the proposed injection site the top of the Wasatch Formation was reached at a depth of 9,600'. It can be predicted that the top of the Mesaverde Group would be reached at a depth of at least 12,000', the Castlegate Sandstone Member of the Mesaverde Group at 14,250', the Dakota Sandstone at 18,550', the Jurassic Entrada Sandstone at 19,500', and the Mississippian Madison Limestone at 21,600'. The preceding examples of potential USDW candidates are well out of reach in depth terms and are certainly not going to contain water with under 10,000 mg/l TDS.

Sincerely yours,



David L. Allin
Agent for Arrow Mud

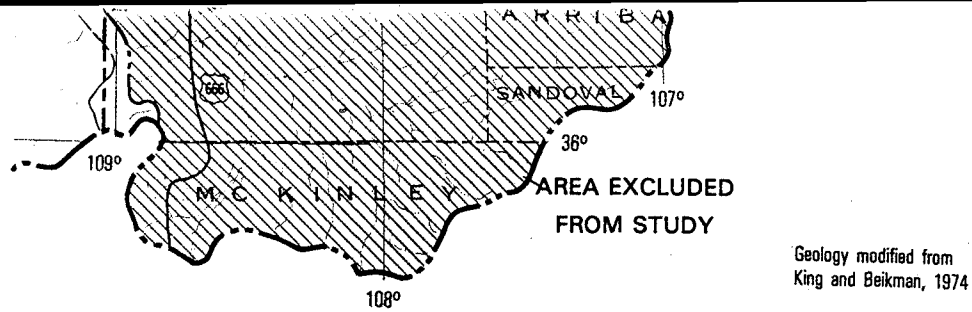
DLA/tc

cc: Frank Arrowchis, Proprietor
Arrow Mud

Don Ostler, Executive Secretary
Utah DEQ
Division of Water Quality

Gilbert Hunt, UIC
Utah DNR
Division of Oil, Gas and Mining

David H. James, President
Western Operating Company



terbedded sandstone. The shale functions mainly as a confining layer between the Dakota and Mesaverde aquifer systems, but includes locally significant sandstone aquifers that were formed by oscillations of the shoreline of the Cretaceous seaway. The Frontier, Ferron, and Emery Sandstone Members represent the most extensive aquifers in the Mancos system, but typically comprise less than 10 percent of the total thickness of an otherwise nearly impermeable unit. Ground-water occurrence and movement in the Dakota aquifer system, the Mancos Shale system, and related formations is illustrated in figure 17.

d movement in the Glen Canyon Group and equivalent formations

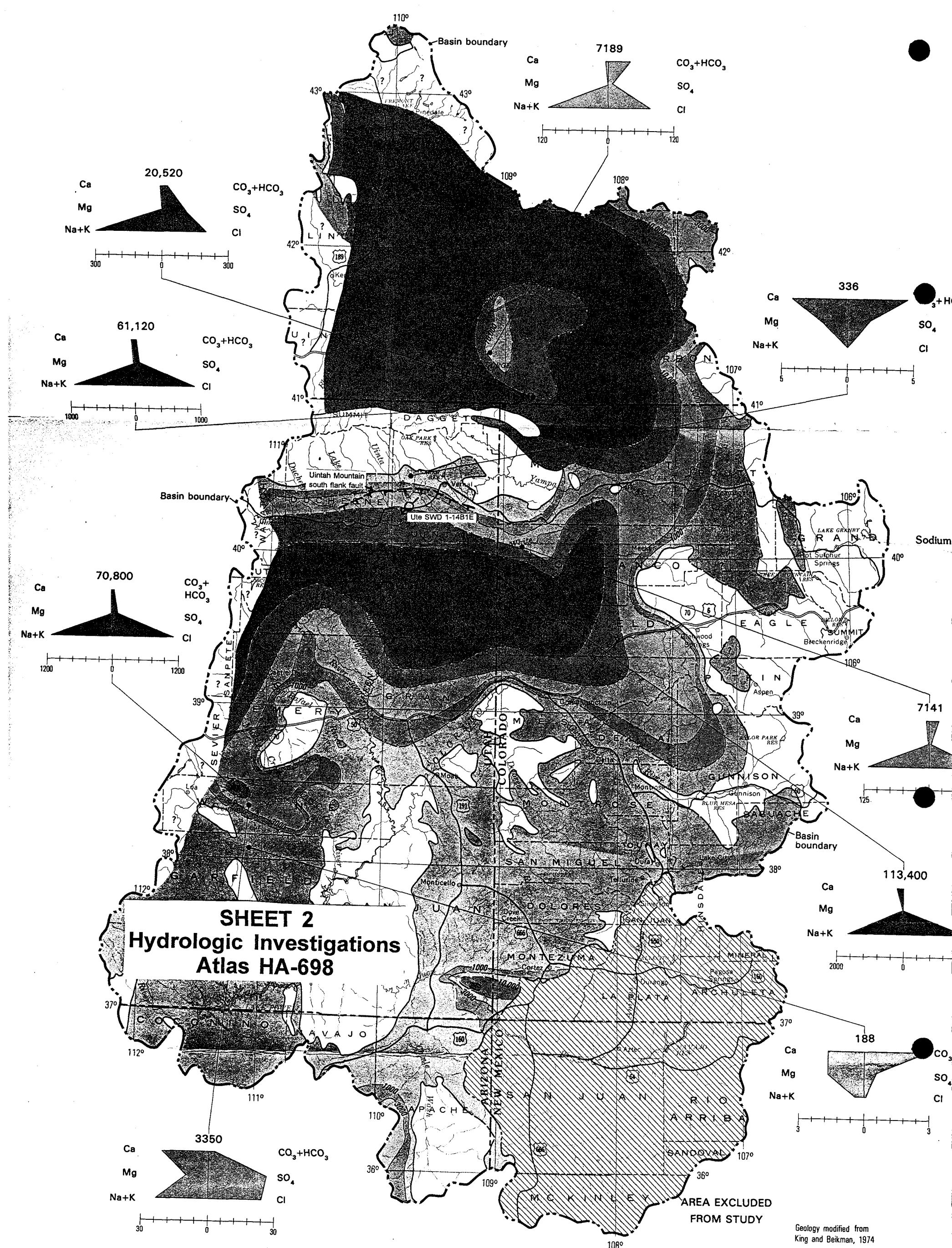
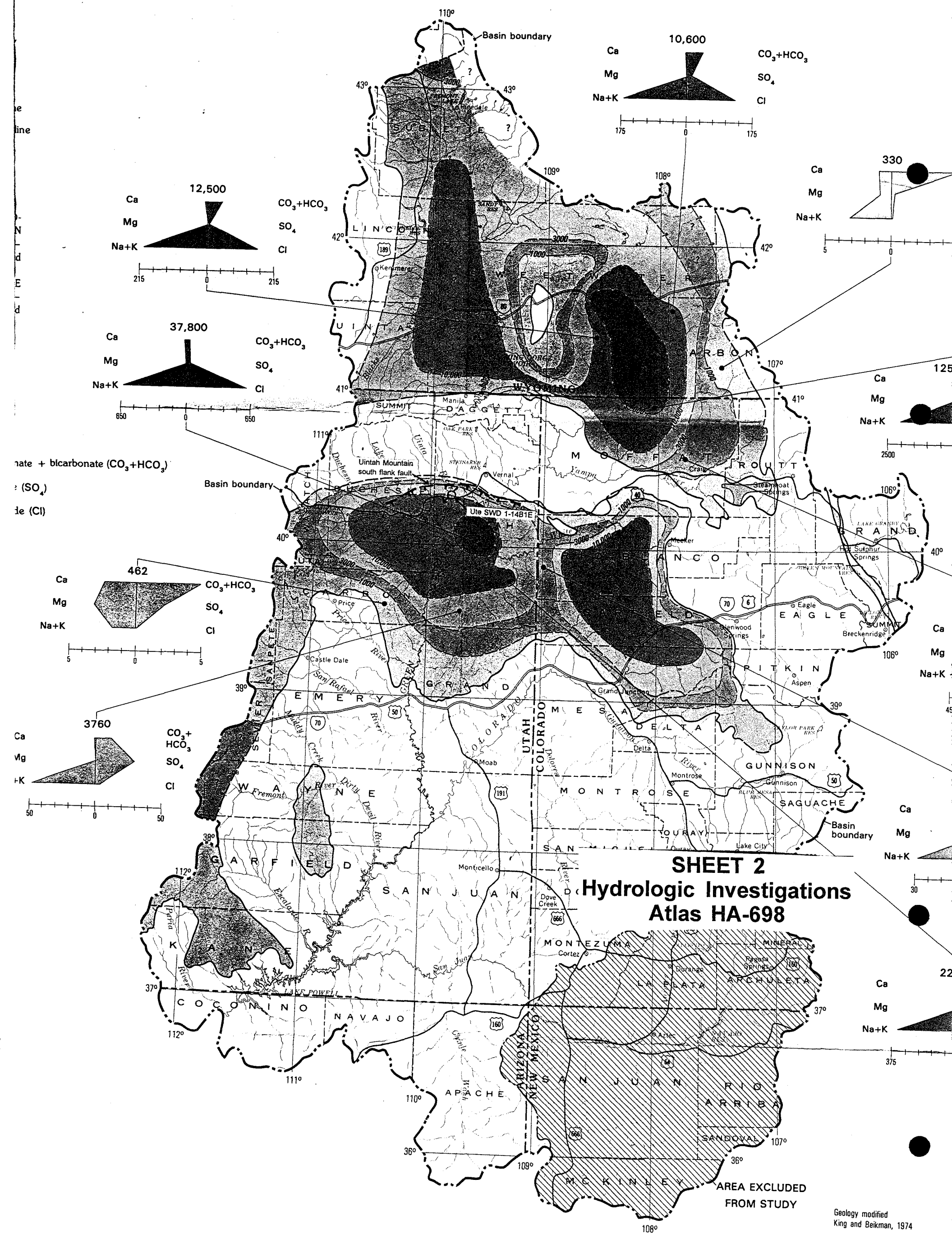


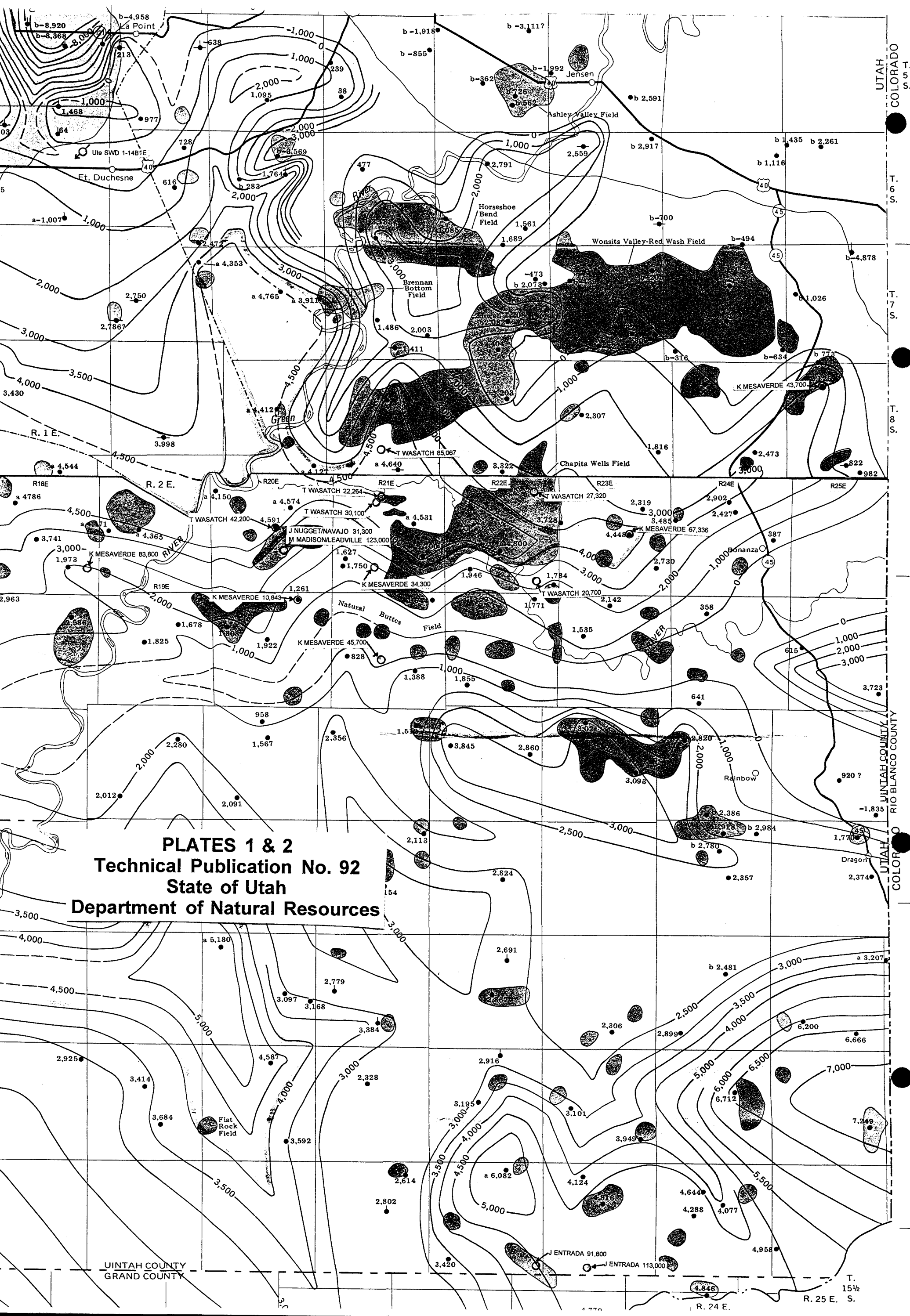
Figure 19.—Chemical classification and dissolved-solids concentration of water in the middle hydrogeologic unit

Figure 16.—Areal extent and thickness of the upper hydrogeologic unit

Figure 17.—Ground-water occurrence and



Geology modified
King and Beikman, 1974



ALLIN PROPRIETARY

DAVID L. ALLIN, CERTIFIED PETROLEUM GEOLOGIST # 2934, A.A.P.G.
660 NORTH COLUMBUS STREET, SLC, UT 84103 U.S.A. (801) 521-0215

March 10, 1994

John A. Carson
U. S. Environmental Protection Agency
Region VIII
Denver Place, Suite 500 (8WM-DW)
999 18th Street
Denver, CO 80202-2466

MAR 11 1994

OF OIL, GAS & MIN.

Re: Arrow Mud UIC Class I Permit Application
Ute SWD 1-14B1E (Formerly Page Exxon Ute Tribal 1-14B1E)
Class II Permit No. UT1645-03728
Uintah County, Utah

Dear Mr. Carson:

I have enclosed the Certificate of Analysis produced yesterday from the results of testing water samples for TDS by Chemtech Analytical Laboratory here in Salt Lake City. The water samples were collected from four wells located to the northwest of the Ute SWD 1-14B1E. The wells were chosen since they are the nearest wells producing from Wasatch formation perforations without commingling with the overlying Green River formation. After further research this morning I found that the Pappadopoulos 1 was recompleted during 1991 and is now producing commingled fluids. I will discuss the details of each well below after some general comments.

These sample were collected from production tank batteries by Mr. Frank Arrowchis and witnessed by the appropriate pumper (employee) of the operator of each well on various days over the past few weeks. The samples were placed in well rinsed, one gallon, HDPE jugs typically used to transport milk and fruit juices. It was assumed that all the water in the tanks that were sampled came directly from the correlative wellheads although mixture with other fluids introduced into the tanks for disposal is a possibility. The results from the Horrocks 2 water were in the range that I would have predicted from zones recharged from the south limb of the Uinta Basin. The others were much lower due to circumstances for which I will suggest possible explanations. It may be possible that the results were altered by our sampling technique.

The Flying J Oil & Gas Magdalene Pappadopoulos 1 well was sampled on February 5, 1994. It is located in the NESW of Section 34, T 1 S, R 1 E, USM at a distance of 3 miles north northeast of the Ute SWD 1-14B1E. The TDS number from this sample was the lowest at 4,360 mg/l. The well was originally perforated in the lower Wasatch formation between 11,422' and 12,278'. The top of the Wasatch formation was listed in the completion report of March, 1977, at a depth of just 9,337'. That pick must be on the top of a Wasatch tongue about 2,000' uphole from the main body of the Wasatch formation or the Wasatch formation must get dramatically thicker to the north against the Uinta Mountains south flank fault.

During the summer of 1991, the well was worked over and plugged back to 11,763'. From that point on the well was producing fluids from both the Wasatch and Green River formations in zones between 11,322' to 11,760' and 8,438' to 10,604' respectively. In conjunction with the workover to add Green River formation production in the well three attempts to squeeze cement through holes in the surface casing found at 4,737' and 4,741' failed to pass pressure tests and may be a source of fresh water influx in the well.

It should be noted, however, that the moderately saline water sampled from this well may be sourced from recharge areas in the Uinta Mountains. This water would have much less travel distance than water in interfingering aquifers that are sourced on the south limb of the Uinta Basin and would thus be predictably less saline. Log analysts in the petroleum industry concentrate their perforating recommendations on zones that appear to be oil bearing because of their high measured resistivities. The south limb sourced aquifers

intersected by wells in the vicinity are easy to avoid because of their high salinities and characteristic low resistivity signatures on well logs.

A bias toward perforating aquifers containing the least saline water exists in the oil fields. In the vicinity of the Ute SWD 1-14B1E there are thicker, prolific aquifers in the Wasatch formation that are highly saline that are avoided by the perforators. The thinner aquifers that contain moderately saline water sourced in the north wind up getting perforated in error due to log response. Both north and south sourced aquifers appear to exist in the subsurface of the immediate area and they are interfingering. It is apparent that the Uinta Basin is internally drained and that drain lies deep to the west of subject area of Uinta County, but the moderately saline water produced from the Magdalene Pappadopoulos 1 complicates simple classification of the Wasatch formation as a whole unless the water has invaded from uphole.

The uphole water invasion is a possible explanation for the unexpectedly low TDS content in the water from the Magdalene Pappadopoulos 1, but it does not explain the 5,980 mg/l TDS number from the well just a little over one-half mile to the south southwest at the Medallion Exploration Winn P2 well. The Winn P2 lies in the NWNW of Section 3, T 2 S, R 1 E, USM 2.7 miles north northwest of the Ute SWD 1-14B1E. This well was completed in December of 1992, and it is unlikely to have mechanical problems this early in its production history. The top of the lower Wasatch formation was picked at 11,345' and the well is producing fluids from perforations from 11,443' to 12,570'. The Wasatch formation oil-bearing stringers that were chosen for completion in this well contained moderately saline water while the log responses in other porosity zones (aquifers) clearly indicated highly saline water and were avoided.

The Quinex Energy Corp. State 1 well is located in the SWSW Section 4, T 2 S, R 1 E, USM 2.9 miles northwest of the Ute SWD 1-14B1E. The State 1 was sampled on February 8, 1993 and produced water that was analyzed with 8,770 mg/l TDS. The well was completed in November of 1991 in the Wasatch formation only between the depths of 11,462' and 12,599'. The top of the lower Wasatch was picked at a depth of 11,555'. The water in this well is substantially more saline than in the first two wells tested.

The fourth well sampled was the Medallion Exploration Horrocks 2. This well is located in the NWNW of Section 5, T 2 S, R 1 E, USM 4.1 miles northwest of the Ute SWD 1-14B1E. This well is the newest of the wells sampled and was just completed during June of 1993. Perforations were made in the Wasatch formation between 11,480' and 12,582' just below the lower Wasatch top of 11,480'. This productive section is virtually the same as that in the previous Wasatch wells in Sections 3 and 4, but this water contained 22,350 mg/l TDS. This number is much more in line with my expectations for water sourced in the south limb of the Uinta Basin.

The Ute 1-14B1E was originally completed in zones as deep as 11,778' which would be equivalent to the zones now producing in the wells to the north which were previously discussed. The geophysical logs from the well indicate the presence of both high resistivity aquifers that contained petroleum and low resistivity aquifers that contained highly saline water. Since no results of analyses were ever preserved, it is impossible to say what the solids content of the Wasatch water was. The well was completed both in the Wasatch and Green River formations within the first few days of testing so the 10,000 plus barrels of water produced was from the commingled zones.

It appears that the bottom line is that unless there was some flaw in our sampling methodology it appears that the Wasatch formation at the north edge of T 2 S, R 1 E, USM contains interfingering moderately saline and highly saline aquifers. My theory is that the formation contains both north and south sourced beds that could account for the salinity differences. It is important to note that north sourced beds should thin rapidly and pinch out in a southerly direction. It is unlikely that there are any north sourced beds in the Wasatch formation in the subsurface of the Ute 1-14B1E.

Mr. Carson
Page Three

My client has experienced as much delay on the conversion of the Ute SWD 1-14B1E as he can possibly stand. I realize that the delays have been caused by our group as much as by any other entity. Under the circumstances, unless it is your opinion that the wells be resampled, I request that your office issue any kind of permit that will allow the disposal of nonhazardous industrial waste as soon as possible. The well can then be configured for that use as well as the existing Class II Permit. Thankyou.

Sincerely yours,



David L. Allin
Agent for Arrow Mud

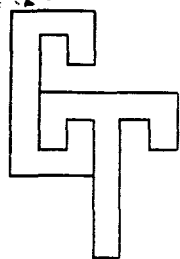
DLA/tc

cc: Frank Arrowchis, Proprietor
Arrow Mud

Don Ostler, Executive Secretary
Utah DEQ
Division of Water Quality

Gilbert Hunt, UIC
Utah DNR
Division of Oil, Gas and Mining

David H. James, President
Western Operating Company



CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 3-09-94

TO: Arrow Mud
660 No. Columbus St.
Salt Lake City, Utah 84103-2117

PROJECT: TDS Wasatch Formation Water

DATE SUBMITTED: 3-03-94

DATE ANALYZED: 3-08-94

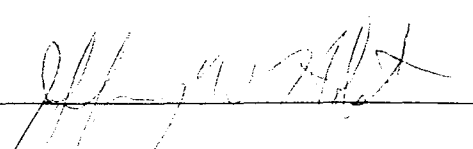
METHOD USED: EPA 160.1

CERTIFICATE OF ANALYSIS

SAMPLE ID:	(2-5B1E) Dtel	Horrocks 2-SB1E	WINN P2-3B1E	Pappadopoulos 1-34A1E	1-4B1E
LAB #:		2-18-94 <u>U003234</u>	3-01-94 <u>U003235</u>	2-05-94 <u>U003236</u>	2-08-94 <u>U003237</u>
<u>PARAMETER</u>					
TDS, mg/l		*22,350	5,980	*4,360	*8,770

NOTE: Sample temp. when submitted was 16.1°C not on ice.

*Submitted past holding time.

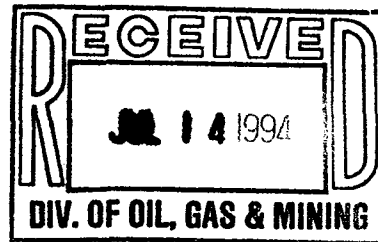
Approved By: 

ALLIN PROPRIETARY

DAVID L. ALLIN, CERTIFIED PETROLEUM GEOLOGIST # 2934, A.A.P.G.
660 NORTH COLUMBUS STREET, SLC, UT 84103 U.S.A. (801) 521-0215

July 14, 1994

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad, Suite 350
Salt Lake City, UT 84180-1203



Re: Notification Address Change for **Utah Account N2350**, Arrow Mud

Ladies and Gentlemen:

As the Agent for Arrow Mud, I have been filing various monthly, quarterly and annual reports to your agency as well as the Utah State Tax Commission for a shutin oil well which Arrow Mud operates. The Arrow Mud Ute SWD 1-14B1E (4304730774), formerly known as the Page Exxon Ute Tribal 1-14B1E, will be converted late this month for use as a salt water disposal well as allowed under EPA Permit UT5645-03728 (Classes II and V).

Under these circumstances no additional production reports, quarterly conservation tax returns or severance tax returns should be required in the future. Arrow Mud is aware that reporting is required by your agency under the Underground Injection Control rules. On Wednesday, I requested via telephone a set of rules and forms from your office to be mailed to Arrow Mud so that the owners can prepare to report directly from their office.

It is important that all future correspondence with Arrow Mud be directed as follows:

**Frank Arrowchis, Proprietor
Arrow Mud
P. O. Box 127
Whiterocks, UT 84085**

Thankyou for your attention to this matter.

Sincerely yours,

David L Allin
Agent for Arrow Mud

c: Frank Arrowchis
Utah State Tax Commission

MONTHLY OIL AND GAS PRODUCTION REPORT

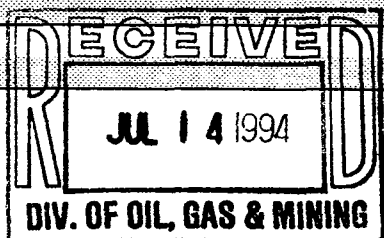
OPERATOR NAME AND ADDRESS:

NOTE CHANGE OF ADDRESS

DAVID L ALLIN
ARROW MUD
660 N COLUMBUS ST
SALT LAKE CITY UT 84103-2117

UTAH ACCOUNT NUMBER: N2350REPORT PERIOD (MONTH/YEAR): 6 / 94AMENDED REPORT ☐ (Highlight Changes)

Well Name			Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location				OIL(BBL)	GAS(MCF)	WATER(BBL)
UTE TRIBAL 1-14-B1E								
4304730774	04521	02S 01E 14	GR-WS	WDW	0	0	0	0
TOTALS						0	0	0



COMMENTS: Note status change to WDW this month. The well will be worked over and converted for use as a water disposal well in July, 1994. All further correspondence with Arrow Mud must be directed to: Frank Arrowchis, Arrow Mud, P.O. Box 127 Whiterocks, UT 84085.

I hereby certify that this report is true and complete to the best of my knowledge.

Date: July 14, 1994Name and Signature: David L. Allin, Agent  NEW Telephone Number: 801-353-4378

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

355 West North Temple, 3 Triad, Suite 350, Salt Lake City, UT 84180-1203

Page 1 of 1

MONTHLY OIL AND GAS DISPOSITION REPORT

OPERATOR NAME AND ADDRESS:

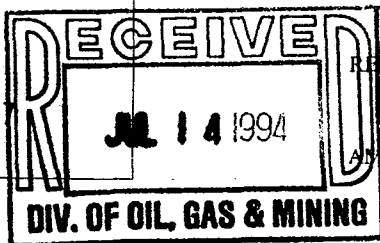
NOTE CHANGE OF ADDRESS

DAVID L ALLIN
ARROW MUD
660 N COLUMBUS ST
SALT LAKE CITY UT 84103-2117

UTAH ACCOUNT NUMBER: N2350

REPORT PERIOD (MONTH/YEAR): 6 / 94

AMENDED REPORT ☐ (Highlight Changes)



ENTITY NUMBER	PRODUCT	GRAVITY	BEGINNING INVENTORY	VOLUME PRODUCED	DISPOSITIONS				ENDING INVENTORY
		BTU			TRANSPORTED	USED ON SITE	FLARED/VENTED	OTHER	
04521 WDW	OIL	N.A.	0	0	0	0		0	0
	GAS	N.A.		0	0	0	0	0	
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
	OIL								
	GAS								
TOTALS			0	0	0	0	0	0	0

COMMENTS: Note status change on this well to WDW. Well will be converted for injection in July, 1994. NEW ADDRESS: Frank Arrowchis, Arrow Mud, P.O. Box 127 Whiterocks, UT 84085

I hereby certify that this report is true and complete to the best of my knowledge.

Date: July 14, 1994

Name and Signature: David L. Allin, Agent

NEW

Telephone Number: 801-353-4378



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

PUBLIC NOTICE
ANNOUNCEMENT of PUBLIC HEARING
UNDERGROUND INJECTION CONTROL PROGRAM

ROOSEVELT, UTAH
TUESDAY, AUGUST 23, 1994

PURPOSE OF PUBLIC NOTICE

The purpose of this notice is to announce that a public hearing has been scheduled for 7:00 - 9:00 P.M., Tuesday, August 23, 1994, at the Uintah Basin Applied Technology Center, Roosevelt, Utah. The United States Environmental Protection Agency (EPA) will conduct the hearing. Comments will be heard on the EPA proposal to issue a Class V injection well permit to Arrow Mud, P.O. Box 127 Whiterocks, Utah 84085. Arrow Mud proposes to inject nonhazardous industrial waste into the Douglas Creek portion of the Green River Formation from 8,185 to 8,500 feet.

The Ute #1-14B1E is currently permitted as a Class II well for the injection of oil field produced water, and has been in operation since September 23, 1993. The well is located in the NW 1/4 of the NE 1/4, 1,522 feet from the east line and 735 feet from the north line of Section 14, T2S-R1E, Uintah County, Utah and lies within the boundary of the Uintah-Ouray Reservation.

The Public Notice for the issuance of a draft permit for this facility was published in the Uintah Basin Standard on May 31, 1994, and in the Vernal Express on June 1, 1994. The comment period closed on July 3, 1994. The public is encouraged to attend the public hearing and to comment on the EPA proposal to issue a final Class V injection well permit for the Ute #1-14B1E.

FINAL PERMIT DECISION and APPEAL PROCESS

After the public hearing, Region VIII of the EPA will decide whether to issue or deny the permit. Within thirty (30) days of the service of notice of the decision, any person who submitted written comments on the Draft permit or who participated in the public hearing may petition the Environmental Appeals Board at the U.S. Environmental Protection Agency, Office of the Administrator, 401 M Street, SW, Room 1145 (West Tower),



Washington, D.C. 20460 to review the permit decision. Anyone seeking review by the Administrator is referred to 40 CFR Sections 124.15 through 124.20 for the procedural requirements of the permit review process.

You may contact Mr. John Carson for additional information, including the full administrative record and copies of the Draft Permit, between the hours of 8:30 a.m. to 4:30 p.m. Monday through Friday:

U.S. Environmental Protection Agency
Region VIII, 8WM-DW
UIC Implementation Section
ATTN: John Carson
999 18th Street, Suite 500
Denver, Colorado 80202-2466
Telephone (303) 293-1435

JUL 19 1994

Date of Publication



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

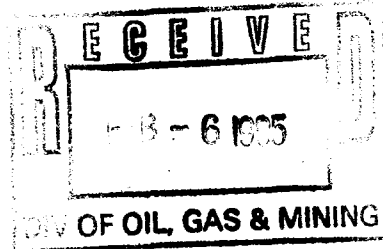
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

FEB - 2 1995

Ref: 8WM-DW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Frank Arrowchis
Proprietor
Arrow Mud
P.O. Box 127
Whiterocks, Utah 84085



RE: UNDERGROUND INJECTION CONTROL (UIC)
Class V Final Permit for the Ute
#1-14B1E (EPA Permit UT5645-03728)
Uintah County, Utah

Dear Mr. Arrowchis:

Enclosed is the Final Underground Injection Control Permit for the Class V disposal well, the Ute #1-14B1E, in Uintah County, Utah. Also enclosed is a Fact Sheet which discusses development of the permit, and a Responsiveness Summary which deals with comments concerning the issuance of the permit.

The public comment period following the issuance of the draft permit for this Class V permit ended July 3, 1994. Due to comments received from the public and the State of Utah during the comment period, a public hearing was held in Roosevelt, Utah, on August 23, 1994. The public comment period following the public hearing ended September 2, 1994. All comments received regarding the issuance of this permit, and EPA's response to the comments, are discussed in the Responsiveness Summary.

Any person who submitted comments on the draft permit or participated in the public hearing may file a petition with the Environmental Appeals Board, U.S. Environmental Protection Agency, to review Region VIII's decision to issue this permit. The procedure for filing a petition is described in the enclosed Administrative Review document (40 CFR §124.19). This permit shall become effective thirty (30) days after the date of issuance, in order to allow sufficient time for a petition to be filed, if any commenter desires to do so.



Printed on Recycled Paper

If you have any questions or comments concerning this action, you may contact John Carson at (303) 293-1435. Also, please direct all correspondence to the attention of John Carson at Mail Code 8WM-DW.

Sincerely,

for Peter C. Crotty

Max H. Dodson
Director
Water Management Division

Enclosures: Fact Sheet
Final Permit
Responsiveness Summary
Administrative Review

cc: David James w/enclosures
Western Operating Company

Jerry Kenczka w/enclosures
Bureau of Land Management

Luke Duncan w/enclosures
Northern Ute Tribe

Gilbert Hunt w/enclosures
State of Utah Natural
Resources, Division of
Oil, Gas and Mining

Ferron Secakuku w/enclosures
Northern Ute Tribe

Jonas Grant w/enclosures
Uintah-Ouray Business Committee

Alvin Ignacio w/enclosures
Ute Tribe Energy & Minerals Dept.

Norman Cambridge w/enclosures
Bureau of Indian Affairs

Don Ostler w/enclosures
Utah Department of Environmental Quality
Division of Water Quality

Dennis Downs w/enclosures
State of Utah Natural Resources
Division of Solid and Hazardous Waste

David L. Allin w/enclosures
Allin Proprietary/Petroleum Consulting

ADMINISTRATIVE REVIEW (40 CFR §124.19)

1. Any person who filed comments on the tentative permit decision or participated in any public hearing on such decision may petition the Administrator to review any condition of the final permit decisions.
2. Any person who failed to file comments or participate in any public hearing on the tentative permit decision may petition for administrative review only to the extent of the changes from the tentative to the final permit decision.
3. The petition must include a statement of the reasons supporting that review, including a demonstration that any issues being raised in the petition were previously raised during the public comment period or during any public hearing and, when appropriate, a showing that the condition in question is based on:
 - a. A finding of fact or conclusion of law which is clearly erroneous; or
 - b. An exercise of discretion or an important policy consideration which that Administrator should, in his or her discretion, review.
4. Such a request must be made within thirty (30) days of service of notice of the Regional Administrator's action, and shall be mailed to:

U.S. Environmental Protection Agency
Office of the Administrator
Environmental Appeals Board (A-101)
401 M Street, SW
Room 1145 (West Tower)
Washington, D.C. 20460

FACT SHEET

ARROW MUD
UTE #1-14B1E, CLASS V WELL
UINTAH COUNTY, UTAH
EPA PERMIT NUMBER: UT5645-03728

CONTACT: John A. Carson
U.S. Environmental Protection Agency
UIC Implementation Section, 8WM-DW
999 18th Street, Suite 500
Denver, Colorado 80202-2466
Telephone: (303) 293-1435

DESCRIPTION OF FACILITY AND BACKGROUND INFORMATION:

On August 24, 1992, Arrow Mud, Whiterocks, Utah, made application for a Class I underground injection control permit to convert the Ute #1-14B1E well for injection. This well was drilled during 1980 and completed as a producing oil well in the Wasatch Formation. The application was for the injection of nonhazardous industrial waste fluids and produced water from oil and gas wells in the Altamont-Bluebell Field area, through selectively perforated intervals in the Douglas Creek Member of the Green River Formation between the depths of 8,186 and 8,500 feet. Western Operating Company of Denver, Colorado, was designated as the contract operator for the injection well.

A draft permit for a Class I well was issued to Arrow Mud on April 21, 1993; however, during the public notice period following the issuance of the draft permit, it was revealed that Arrow Mud's lease agreement with the Ute Indian Tribe did not provide for a Class I well operation. Therefore, Arrow Mud elected to withdraw their Class I application, and instead, requested that a Class II permit be issued solely for the disposal of produced water from oil and gas wells in the Altamont-Bluebell Field area. Accordingly, a final Class II permit was issued for the well on August 24, 1993. Since that time, the Arrow Mud/Tribal lease has been amended to provide for the disposal of both Class I and Class II fluids in the Ute #1-14B1E well.

Following the developments described above, Arrow Mud requested on October 1, 1993, that the Class I permit be reissued for the disposal of nonhazardous industrial waste, based on data submitted in their original permit application. However, due to the possible existence of underground sources of drinking water (USDWs) below the proposed injection zone, this permit will be issued as a Class V permit. A Class I permit limits injection into formations which are below the lowermost USDW in a well, whereas a Class V permit provides for injection into formations that are above, as well as below USDWs. This Class V permit will authorize the Ute #1-14B1E to dispose of nonhazardous industrial

fluids, as well as Class II fluids. The permittee intends the major portion of injection fluids to be produced oil field waters, with lesser amounts of nonhazardous industrial fluids.

The industrial waste fluids proposed for disposal will be those associated with the exploration, development, production, refining, and transportation of crude oil, natural gas, or geothermal energy, and possibly drilling fluids, pipeline and tank discharges, and used oil or lubricants, plus additional fluids, as long as they are determined to be nonhazardous by EPA. The sources of these fluids will be petroleum companies, industrial facilities, public utilities, the Ute Indian Tribe, and possibly household waste collection programs. Class II fluids will consist of produced water with salinities ranging from 7,000 to 300,000 mg/l. The permittee has requested a maximum injection pressure of 1,250 pounds per square inch gauge (psig), with an average injection pressure of 750 psig. The anticipated average injection rate is 5,000 barrels of fluid per day, with a maximum rate of 10,000 barrels per day.

The operation covered by the application is in a portion of the Bluebell East Field, located on Indian land in the NW 1/4 of the NE 1/4, 1,522 feet from the east line and 735 feet from the north line of Section 14, T2S-R1E, Uintah County, Utah, and within the exterior boundary of the Uintah-Ouray Indian Reservation. At the time of the initial permit application for a Class I well, the permittee sent notices to all surface landowners within one-half (1/2) mile of the well of their intent to apply for a UIC permit for the disposal of nonhazardous industrial wastes.

Prior to commencement of injection as a Class V well, the Ute 1-14B1E must be tested for mechanical integrity. The demonstration must be witnessed by a representative of the EPA and shall consist of two parts: (1) a casing/tubing annulus pressure test to verify the absence of leaks in the casing, tubing, and packer, and (2) a radioactive tracer survey (RATS) and temperature log to verify that no movement of fluids exists outside the casing into an underground source of drinking water (USDW) through vertical channels adjacent to the wellbore.

Arrow Mud has submitted all required information and data necessary for permit issuance in accordance with 40 CFR Parts 124, 144, 146, and 147, and a final permit has been prepared. The permit will be issued for a period of ten (10) years; no reapplication will be necessary during this period, unless the permit is terminated for reasonable cause (40 CFR 144.39, 144.40 and 144.41). However, the permit will be reviewed at least once every five (5) years. The results of the five-year review will be used to determine if changes in the permit are needed.

This Fact Sheet gives the derivation of the site-specific permit conditions and reasons for them, on the basis of the direct implementation regulations promulgated for the Uintah-Ouray Indian Tribal lands in the State of Utah, under the Underground Injection Control (UIC) program provisions for the Safe Drinking Water Act (SDWA). The referenced sections and conditions correspond to the sections and conditions in Permit UT5645-03728. The general permit conditions for which the content is mandatory and not subject to site specific differences (based on 40 CFR Parts 124, 144, 146 and 147), are not included in the discussion.

Part II, Section A WELL CONSTRUCTION REQUIREMENTS

Casing and Cementing

(Condition 1)

All casing and cementing details were submitted with the permit application. For the injection well, construction is as follows:

- (1) Surface casing (10-3/4 inch) is set in a 14-3/4 inch diameter hole to a depth of 1,653 feet kelly bushing (KB). The casing is secured with cement which was circulated to the surface, isolating the casing from the wellbore.
- (2) Long string casing (7-5/8 inch) is set in a 9-7/8 inch diameter hole to a depth of 9,910 feet KB. This casing is secured with 830 sacks of cement, extending from the casing shoe, up to a depth of approximately 5,800 feet.
- (3) A liner (5 inch) is hung inside the long string casing at 9,705 feet and extends to a total depth of 11,794 feet in a 6-3/4 inch hole. The liner is secured with cement from the shoe to the top of the liner.

Known underground sources of drinking water (USDWs) in this area are alluvial gravels at the surface, and sands in the Duchesne River Formation to a depth of 1,200 feet. The Uinta Formation underlies the Duchesne River and extends to a depth of approximately 5,040 feet. The Uinta consists of interbedded calcareous shales, some limestones, claystones, siltstones, and sandstones. Some sands within the Uinta contain moderately saline waters (3,000 to 10,000 mg/l TDS), as indicated by data in the State of Utah Department of Natural Resources Technical Publication No. 92., and a drill-stem test of a lower Uinta sand in the well at a depth of 5,000 feet. This test recovered formation water containing 10,000 ppm chloride. Based on this evidence and Publication No. 92, the base of moderately saline waters is at an approximate depth of 5,050 feet. Below this depth, formations are expected to contain waters with similar or greater TDS values; however, there are some sands below the

Douglas Creek injection zone in the much deeper Wasatch Formation that contain waters with TDS less than 10,000 mg/l, and therefore, classified as USDWs.

Underlying the Uinta Formation are the Parachute Creek, Garden Gulch, and Douglas Creek Members of the Green River Formation, extending from 5,038 feet to the top of the Wasatch Transition at 9,406 feet. The confining zone above the injection interval in the Douglas Creek is the Garden Gulch which is composed of dark gray to black shale with interbedded siltstones with a thickness of 2,014 feet, between the depths of 6,166 and 8,180 feet. This confining zone will provide an effective barrier to upward movement of fluids from the injection zone; beneath the injection zone, interbedded shales, claystones, carbonates and sands of the Douglas Creek will prevent any downward movement of fluids into the deeper Wasatch Formation.

Based on the construction and cementing details of the well, all known and possible USDWs should be adequately protected. The Garden Gulch confining zone, proposed injection interval, and underlying formations are behind the cemented portion of the long string casing; however, during conversion of the well, a cement bond log (CBL) will be run in the well to verify the integrity of the cement. Remedial cementing behind the casing shall be performed if necessary.

Conversion operations of the Ute #1-14B1E for injection operations will consist of the following:

- 1) Set a cast iron bridge plug (CIBP) in the 7-5/8 inch casing at 9,680 feet (25 feet above the top of the 5-inch liner) and cap with 10 sacks of cement;
- 2) Run a CBL from 8,700 to 5,000 feet to evaluate the condition of cement behind casing and verify top of cement; perform remedial cementing if necessary;
- 3) Set a cast iron bridge plug (CIBP) in the 7-5/8 inch casing at 8,550 and cap with 10 sacks of cement;
- 4) Record water level within the casing;
- 5) Run 2-7/8 inch tubing and packer and set at 8,150 feet;
- 6) Pressure test tubing/casing annulus above packer to 1,250 psi and conduct remedial work if necessary;
- 7) Fill tubing/casing annulus with fresh water, treated for oxygen, bacteria, and scale;
- 8) Nipple up wellhead and pressure test annulus to 1,250 psi;

9) Perform injection test to determine efficacy of perfs and remediate if necessary; and

10) Prepare and submit stimulation plan if warranted.

Tubing and Packer Specifications

(Condition 2)

The tubing information (2-7/8 inch) submitted by the applicant is incorporated into the permit and shall be binding on the permittee. The depth of the packer will be approximately 8,150 feet; in no instance is the packer to be more than 50 feet above the uppermost perforations.

Monitoring Devices

(Condition 3)

Prior to beginning Class V nonhazardous injection operation, the operator shall install continuous recording devices which will monitor the operation of the well; these devices shall be maintained as long as the permit is in effect.

The monitoring devices shall continuously record: (1) injection pressure; (2) casinghead pressure of the tubing/casing annular space; and (3) flow rate and volume. The tubing/casing annulus shall be maintained full of fresh water treated with a non-toxic corrosion inhibitor and maintained under a minimum positive pressure of 300 psig. This may be achieved through the use of an above-ground fluid reservoir with a gas cap of nitrogen to maintain the positive pressure. Maintaining positive pressure on the annulus provides assurance that the monitoring is representative of actual downhole changes. A continuous recording of injection volume is to be accomplished by use of a non-resettable cumulative volume totalizer.

The permittee shall provide and maintain in good operating condition: a 1/2 inch fitting with a cut-off valve at the wellhead on the tubing, and a similar fitting and cut-off valve for the casing/tubing annulus. These valves shall be positioned to allow the attachment of pressure gauges certified for ninety-five (95) percent accuracy, or better, throughout the range of permitted operation in order to monitor the injection and annulus fluid pressures. A flow meter with a volume totalizer, and a sampling tap shall be installed between the injection pump and wellhead. In addition, installation of a pump shut-off interlock device to prevent the surface injection pressure from exceeding 2,400 psig. The permittee shall be required to maintain these devices in good operating condition.

Formation Testing

(Condition 5)

The permittee must determine the static bottom-hole pressure of the injection zone. Analysis of a water sample of the injection zone indicated a TDS content of 22,653 mg/l, verifying that the zone is not a USDW. A step-rate test of the injection

zone was conducted on September 29, 1994, and will not need to be repeated prior to commencement of injection. A pressure fall-off test of the injection zone shall be performed after injection has taken place for a sufficient period of time to allow reservoir conditions to stabilize. Subsequent pressure fall-off tests shall be repeated on an annual basis for the purpose of monitoring pressure buildup in the injection zone. These tests will detect any significant loss of fluids due to fracturing in the injection and/or confining zone, and aid in determining the lateral extent of the injection plume.

The pressure fall-off tests shall involve injecting fluids at a constant rate for at least twenty-four (24) hours, or a sufficient period of time until the reservoir pressure reaches stability, followed by a shut-in period of sufficient duration to establish a valid observation of a pressure fall-off curve as the reservoir reaches ambient pressure. The initial pressure buildup should be performed with a downhole pressure gauge in order to avoid any effect of casing storage. It is important that the initial and subsequent tests follow the same test procedure, so that valid comparisons of reservoir pressure, permeability, and porosity can be made. The permittee shall analyze test results and provide an annual report which compares the results with previous test data.

PART II, Section B CORRECTIVE ACTION

There are no other wells within a 1/2-mile area of review (AOR) of the Ute #1-14B1E; however, within a two-mile radius of the well (requirement of Utah Department of Environmental Quality for Class I wells) there are two temporarily abandoned and two permanently abandoned wells which are perforated in the Douglas Creek injection zone. The two plugged and abandoned wells are cased and cemented throughout the confining zones above and below the Douglas Creek interval, with cast iron bridge plugs (CIBP) capped with cement inside the casing immediately above the perforations. The temporarily abandoned wells also have casing cemented throughout the confining zones above and below the Douglas Creek.

All four wells are considered to be outside the radius of direct influence of the injection well and any pressure increase would be minimal. In addition, pressure fall-off tests are to be conducted in the injection well on an annual basis in order to monitor the pressure buildup in the injection zone and help determine the lateral extent of the injection plume. The pressure values will be used to recalculate the long term pressure buildup to determine if permit changes regarding the temporarily abandoned wells are needed. In view of the above, no corrective action by the permittee is considered necessary prior to the issuance of a Class V permit.

PART II, Section C WELL OPERATION

Prior To Commencing Injection

(Condition 1)

Injection of nonhazardous fluids into the Ute #1-14B1E will not commence until mechanical integrity tests have been performed and witnessed according to the guidelines discussed in the permit. These integrity tests are to include a standard tubing/casing annulus pressure test, and a radioactive tracer survey (RATS) and temperature log of the well (the RATS and temperature log should be run 60 days after the start of injection. These tests shall be planned and run in such a manner that assures they do not interfere with each other, and must be approved by the Director prior to being conducted in the well. In addition, the permittee shall submit a water level reading, cement bond log (CBL), and Well Rework Record (EPA Form 7520-12).

Mechanical Integrity

(Condition 2)

A tubing/casing annulus pressure test must be repeated at least every two (2) years in order to demonstrate continued tubing, packer, and casing integrity. The tests shall be run while the well is shut-in at a pressure which is at least 300 psi greater than the shut-in tubing pressure. During normal operation, if a change in annular pressure exceeds 300 psi, the well will be shut-in and EPA notified. If the pressure change can not be related to a change in operation, such as temperature, a mechanical integrity test will be conducted on the well.

The absence of any flow behind casing must also be demonstrated; this shall be initially accomplished by performing a radioactive tracer survey (RATS) and a temperature log, with subsequent tests performed at five (5) year intervals. The permittee shall provide a procedure for running the RATS and temperature log which must be approved by EPA. Elimination of subsequent RATS will depend on results of the initial temperature log.

Injection Interval

(Condition 3)

Injection shall be limited to selected intervals within the Douglas Creek Member of the Green River Formation, between the depths of 8,186 and 8,500 feet.

Injection Pressure Limitation

(Condition 4)

The permittee has requested a maximum surface injection pressure of 1,250 pounds per square inch gauge (psig), with an average of 750 psig; however, the maximum allowable injection pressure shall be based on the results of a step-rate test of the injection zone which was performed on September 29, 1994.

This test indicated a fracture gradient of the injection zone of 0.73 psig/ft. This value is used in determining the maximum surface injection pressure as shown below:

$$FPS = (FG)(h) - (S_g)(0.433)(h)$$

Where,

FPS = Fracture Pressure at the Surface (psig)
FG = fracture gradient 0.73 psig/ft
h = depth to top of perforations = 8,186 feet
S_g = specific gravity of fluid = 1.01

$$FPS = (0.73)(8186) - (1.01)(0.433)(8186)$$

$$FPS = 5976 - 3579 = 2397 \text{ psig}$$

Therefore, a maximum injection pressure of 2,400 psig is approved for this well. Permit provisions have been made that allow the Director to increase or decrease the injection pressure, based on the results of additional step-rate tests. The testing method must be approved by the EPA prior to conducting the test. A new requested pressure shall not exceed the formation breakdown pressure.

Injection Volume Limitation

(Condition 5)

There is no limitation on the number of barrels of fluid per day (BFPD) that may be injected into the Ute #1-14B1E, or in the cumulative number of barrels injected, provided that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4., of this permit.

Injection Fluid Limitation

(Condition 6)

Fluids injected into the Ute #1-14B1E shall be limited to Class II fluids, plus nonhazardous industrial fluids as provided for in this permit. The industrial fluids proposed for injection, provided they meet TCLP standards and are not listed hazardous wastes, are listed below:

- 1) used motor oils;
- 2) petroleum based lubricants;
- 3) nonhazardous industrial waste fluids that have been approved for disposal by the Director.

Class II fluids which are authorized for injection in the well are as follows:

- 1) produced water from oil and gas production;
- 2) waste fluids from the actual drilling operation;
- 3) pigging fluids from the cleaning of collection and injection lines within the field;

- 4) used workover and stimulation fluids recovered from production, injection, and exploratory wells;
- 5) gas, such as methane, CO₂ or nitrogen used for enhanced recovery/pressure maintenance of production reservoirs;
- 6) brine reject from water softeners associated with enhanced recovery;
- 7) waste fluids from methane sweetening and dehydration, which is blended with produced water, as long as it is not hazardous at the point of injection;
- 8) waste fluids from circulation during well cementing;
- 9) waste oil and fluids from cleanup associated with primary production (but not the transportation) of oil within the oil field;
- 10) fresh water used for enhanced recovery makeup; and
- 11) water containing chemicals such as polymers for the purpose of enhanced recovery.

PART II, Section D MONITORING, RECORDKEEPING AND REPORTING OF RESULTS

Injection Well Monitoring Program

(Condition 1)

EPA regulations (40 CFR Part 146.13) require continuous monitoring and recording of injection pressure, flow rate, volume, and tubing/casing annulus pressure. The permittee is also required to analyze water quality of the injected fluids.

All industrial waste fluids intended for injection at the facility shall be sampled for fluid analysis prior to delivery to on-site storage tanks. These fluid samples shall be analyzed for chemical, physical, radiological, and biological constituents, including Ph and conductivity. If the analyses of several loads from the same source indicate little or no change, the Director may elect to waive the requirement that each load be sampled. However, one load of industrial waste coming from the same source (where the process is not likely to change) must be tested each month prior to being transferred to on-site tanks.

Class II oil field waters intended for injection shall be analyzed prior to delivery to on-site storage tanks. The water sample shall be analyzed for total dissolved solids, Ph, specific gravity, and specific conductivity. Any time a new source of injected fluids is added, a water quality analysis shall be made of the new source. This analysis shall be reported to EPA within 30 days of accepting water from the new source.

The commingled fluids will be sampled for analysis at random, but not less than once every three months. This final analysis shall include a determination of total dissolved solids, Ph, specific gravity, specific conductivity, major cations and anions, oil and grease, and total organic carbon.

The permit requires that the average, maximum and minimum monthly values of injection pressure, flow rate and volume, and annular pressure be reported quarterly, along with the data from the fluid analyses. In addition to routine quarterly reporting, the permittee is required to report the results of mechanical integrity tests, well workovers, logging, or testing of the well or injection zone. These reports are due within sixty (60) days of the completion of the activity, or at the time of the next scheduled quarterly report, whichever is sooner.

The permittee is being required to keep records concerning: (1) the location, date and time, nature of source activity, type and volume of fluids picked up for transport to the injection well, (2) the nature and composition of the injection fluids, (3) all monitoring data and/or charts, including continuous pressure, injection rate, and fluid volumes injected, and (4) copies of all reports sent to EPA.

The permittee shall maintain copies (or originals) of all the records listed above at the office of Arrow Mud, P.O. Box 127, Whiterocks, Utah 84085.

PART II, Section E PLUGGING AND ABANDONMENT

Plugging and Abandonment Plan

(Condition 2)

The plugging and abandonment plan (Appendix C) submitted by the permittee, with revisions by EPA, consists of five (5) plugs with the following specifications. All voids between plugs shall be filled with drilling mud. This plan has been reviewed and approved by the EPA and is consistent with UIC requirements.

Plug #1: Within the 7-5/8 inch long string casing, set a Class G cement plug across the injection interval from 8,100 feet to 8,500 feet.

Plug #2: Perforate the 7-5/8 inch long string casing at 5,100 feet for a cement squeeze behind casing from 5,050 to 5,100 feet. Use sufficient quantities of Class G cement to leave a 50-foot cement plug inside the casing.

Plug #3: Perforate the 7-5/8 inch long string casing 50 feet below the 10-3/4 inch surface casing shoe for a cement squeeze of the annulus between the long string casing and borehole, extending upward to 50 feet above the surface casing shoe, between the surface/long string casings. Use sufficient quantities of Class G cement to leave a 100-foot cement plug inside the 7-5/8 inch long string casing.

Plug #4: Within the 7-5/8 inch long string casing, place a 50 sack plug of Class G cement from the surface to 200 feet.

Plug #5: Within the 10-3/4 inch surface casing, place a 50 sack plug of Class G cement from the surface to 200 feet.

PART II, Section F FINANCIAL RESPONSIBILITY

Demonstration of Financial Responsibility (Condition 1)

Arrow Mud has chosen to demonstrate financial responsibility through a Surety Performance Bond (issued to Western Operating Company, the well operator), and a Standby Trust Agreement which have been reviewed and approved by the EPA.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

UNDERGROUND INJECTION CONTROL PROGRAM

Final Permit

Class V Nonhazardous Industrial Waste Disposal Well

Permit No. UT5645-03728

Well Name: Ute #1-14B1E

Field Name: Bluebell East

County & State: Uintah, Utah

issued to:

**Arrow Mud
P.O. Box 127
Whiterocks, Utah 84085**

Date Prepared: November, 1994

Page 1 of 36
EPA **Final** Permit No. UT5645-03728



Printed on Recycled Paper

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PART I. AUTHORIZATION TO INJECT

Pursuant to the Underground Injection Control Regulations of the U. S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147,

Arrow Mud

P.O. Box 127

Whiterocks, Utah 84085

is hereby authorized to operate a Class V disposal well, commonly known as Ute #1-14B1E, located in the NW 1/4 of the NE 1/4, 1,522 feet from the east line and 735 feet from the north line of Section 14, Township 2 South, Range 1 East, in Uintah County, Utah. Injection shall be for the purpose of disposing of nonhazardous industrial waste fluids and produced water from oil and gas fields, in accordance with conditions set forth herein.

Injection activities shall not commence until the operator has fulfilled all applicable conditions of this permit and has received written authorization from the Director. "Prior to Commencing Injection" requirements are set forth in Part II, Section C. 1. of this permit.

All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations and are regulations that are in effect on the date that this permit becomes effective. This permit consists of a total of 36 pages and includes all items listed in the Table of Contents. Further, it is based upon representations made by the permittee and on other information contained in the administrative record.

This permit and the authorization to inject are issued for a period of ten (10) years, unless terminated (Part III, Section B); authorization to inject shall automatically expire due to prolonged postponement of conversion to a Class V injection well (Part II, Section A. 6.). The permit will be reviewed by EPA at least once every five (5) years to determine whether action under 40 CFR § 144.36 (a) is warranted.

The State of Utah or the Northern Ute Indian Tribe of the Uintah-Ouray Reservation may apply for primary enforcement responsibility of the UIC program for Indian lands and may, if qualified, assume primary responsibility for regulating this permittee. Notwithstanding approval of any forthcoming State or Tribal UIC primacy application, EPA retains responsibility for directly administering and enforcing this federal permit, unless otherwise specifically addressed in the EPA/State or EPA/Tribe MOA (40 CFR § 145.25). If EPA determines that the State or Tribe has issued an equivalent permit under an EPA approved UIC program, EPA and the permittee may agree to terminate this federal permit.

JAN 24 1995

Issued _____.

MAR 12 1995

This permit shall become effective _____.

for *Bob C. Chetty*
* Max H. Dodson
Director
Water Management Division

*Note: The person holding this title is referred to as the
"Director" throughout this permit.

PART II. SPECIFIC PERMIT CONDITIONS

A. WELL CONSTRUCTION REQUIREMENTS

1. Casing and Cementing. The construction details submitted with the application are hereby incorporated into this permit as Appendix A, and shall be binding on the permittee. Cement bonds between the wellbore and casing are as follows: (1) cement extends from the base of a liner to the top of the liner; (2) cement extends from the base of the long string casing up to a depth of 5,800 feet kelly bushing; and (3) cement extends from the base of the surface casing to the top of the surface casing. Injection between the outermost casing protecting underground sources of drinking water (USDW) and the wellbore is prohibited.

2. Tubing and Packer Specifications. An injection tubing of two and seven-eighths (2-7/8) inches diameter shall be utilized. A packer shall be set at a depth of approximately 8,150 feet kelly bushing (KB). In no instance is the packer to be more than 50 feet above the top of the uppermost injection interval.

3. Monitoring Devices. Prior to beginning Class V nonhazardous injection operation, the operator shall install and maintain in good operating condition the following equipment:

- (a) a tap on the injection line, for the purpose of obtaining representative samples of the injection fluids;
- (b) two (2), one-half (1/2) inch Female Iron Pipe (FIP) fittings, isolated by ball or needle valves, and located: 1) at the wellhead on the tubing; and 2) on the tubing/casing annulus, and positioned to allow attachment of 1/2 inch Male Iron Pipe (MIP) pressure gauges;
- (c) pressure gauges attached to the FIP fittings of the: 1) tubing/casing annulus to allow for monitoring of the annulus fluid pressure; and 2) the tubing to allow injection pressure monitoring. The tubing/casing annulus shall be maintained full of non-toxic fluid with a corrosion inhibitor under **an initial positive pressure of at least 300 psig.** The operator must submit plans for maintaining and monitoring positive annulus pressure prior to installation of the device. Pressure gauges shall be certified for at least ninety-five (95) percent accuracy, throughout the range of anticipated pressures;

- (d) a flow meter with cumulative volume recorder that is certified for at least ninety-five (95) percent accuracy, throughout the range of injection rates allowed by the permit; and
- (e) installation of suitable equipment for the continuous monitoring and recording of injection pressure, annulus pressure, flow rate, and volume. A continuous recording of injection volume can be accomplished by use of a non-resettable cumulative volume totalizer; and
- (f) **finally, installation of a pump shut-off interlock device to prevent the surface injection pressure from exceeding 2,400 psig.**

4. Proposed Changes and Workovers. The permittee shall give advance notice to the Director, as soon as possible for approval, of any planned physical alterations or additions to the permitted well. Major alterations or workovers of the permitted well shall meet all conditions as set forth in this permit. A major alteration/workover shall be considered any work performed, which affects casing, packer(s), or tubing.

Demonstration of mechanical integrity (tubing/casing annulus pressure test) shall be performed within thirty (30) days of completion of workovers/alterations and prior to resuming injection activities, in accordance with Part II, Section C. 2. (a).

The permittee shall provide all records of well workovers including any repairs, logging, or other test data to EPA within sixty (60) days of completion of the activity. Appendix B contains samples of the appropriate reporting forms.

5. Formation Testing. The permittee shall conduct appropriate tests during the operating life of the well.

- (a) After conversion of the well and prior to injection, the permittee shall obtain a static bottom-hole pressure of the injection zone.
- (b) **The permittee shall perform a pressure fall-off test of the injection zone(s) on an annual basis.** The initial fall-off test shall occur after at least 30 days after the date injection is authorized and prior to 90 days after the date of authorization to inject. Subsequent tests must be run within one year of the previous test. It is recommended that the initial pressure buildup

utilize a downhole pressure gauge, followed by the shut-in fall-off test. Each annual test is to be conducted in the same manner, and the results are to be analyzed in report form for comparison with previous year results.

6. Postponement of Conversion. If the well is not converted to Class V injection status within one (1) year from the effective date of this permit, the authorization to inject as a Class V well will automatically expire, unless the permittee requests an extension. The request shall be made to the Director in writing, in lieu of the annual reporting requirements of Part II, Section D. 4., and shall state the reasons for the delay in conversion and confirm the protection of all USDWs. The extension under this section may not exceed one (1) year.

Financial responsibility and mechanical integrity shall be maintained during the period of inactivity in accordance with Part II, Section F. Once authorization to inject as a Class V well expires under this part, the full permitting process, including opportunity for public comment, must be repeated before authorization to inject will be reissued.

B. CORRECTIVE ACTION

The applicant is not required to take any corrective action.

C. WELL OPERATION

1. Prior to Commencing Injection. Injection operations as a Class V well may not commence until the permittee has complied with (a), and (b) as follows:

(a) Conversion is complete, **including installation of all monitoring devices**, and testing requirements have been fulfilled, including water level and pore pressure of the injection zone. Also required is a cement bond log and Well Rework Record (EPA Form 7520-12).

- (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or
- (ii) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the injection well within thirteen (13) days of the effective date of this permit, in which case prior inspection or review is waived and the permittee may

commence injection. Note: However, in all circumstances, item (b) below must also be satisfied.

- (b) The permittee demonstrates that the well has mechanical integrity and has received notice from the Director that such demonstration is satisfactory. Demonstration of mechanical integrity shall consist of two parts: (1) a tubing/casing annulus pressure test in accordance with 40 CFR 146.8 and Part II, Section C. 2. (a), below, and verification that no flow of fluid exists adjacent to the casing, in accordance with Section C. 2. (b), below. **The permittee shall notify EPA two (2) weeks prior to conducting these tests so that a representative may be present to observe the tests.** Results of the tests shall be submitted to the Director as soon as possible but no later than thirty (30) days after the demonstrations.

2. Mechanical Integrity.

- (a) Absence of Significant Leaks. A demonstration of the absence of significant leaks in the casing, tubing and/or packer must be made by performing a tubing/casing annulus pressure test. **This test shall be for a minimum of forty-five (45) minutes at a pressure of at least 300 pounds per square inch gauge (psig) above the injection tubing pressure while the well is shut-in. The well should be shut-in at least two hours in advance of the test.** Pressure values shall be recorded at five (5) minute intervals. A well passes the mechanical integrity test if there is less than a ten (10) percent decrease or increase in pressure over the forty-five (45) minute period.
- (b) Absence of Significant Flow Adjacent to the Casing. A demonstration of the absence of any significant flow of fluid adjacent to the casing must be made by **initially performing a radioactive tracer survey and a temperature log performed after 60 days of injection** to determine if there is any movement of fluid out of the injection zone(s). The logging plan is to be submitted to the Director for approval, prior to running the logs.

- (c) Schedule of Demonstration of Mechanical Integrity. A demonstration of mechanical integrity (tubing/casing annulus pressure test) shall be made at regular intervals, no less frequently than every two (2) years from the effective date of this permit, in accordance with 40 CFR 146.8 and paragraph (a) above, unless otherwise modified. A tubing/casing annulus pressure test is also required following any workover of the well. Initiation of mechanical integrity demonstrations will be according to the following provisions:
- (i) It shall be the permittee's responsibility to arrange and conduct the routine two-year tubing/casing annulus pressure test demonstration, and five-year radioactive tracer survey and/or temperature log. The procedure for running the radioactive tracer survey and/or temperature log must be approved in advance by the Director. The permittee shall notify the Director of his intent to demonstrate mechanical integrity at least thirty (30) days prior to such demonstration. Results of the test shall be submitted to the Director as soon as possible but no later than sixty (60) days after the demonstration.
 - (ii) In addition to any demonstration made under paragraph (i) above, the Director may require a demonstration of mechanical integrity, as described in Part II, Section C. 2. (a) and (b), at any time during the permitted life of the well.
- (d) Loss of Mechanical Integrity. The well must have mechanical integrity at all times. If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity as defined by 40 CFR 146.8 becomes evident during operation, injection shall be stopped immediately and the permittee shall notify the Director in accordance with Part III, Section E. 10. of this permit. Operations shall not be resumed until the permittee has taken necessary actions to restore integrity to the well and EPA gives approval to recommence injection.

3. Injection Interval. Injection shall be limited to intervals in the Douglas Creek Member of the Green River Formation, **between the depths of 8,186 and 8,500 feet.**

4. Injection Pressure Limitation.

- (a) Injection pressure, measured at the surface, shall not exceed an amount that the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs.
- (b) The exact pressure limit may be increased or decreased by the Director in order to ensure that the requirements in paragraph (a) are fulfilled. In order to determine an exact pressure limit, **the permittee shall conduct a step rate test or other authorized well test(s) that will serve to determine the fracture pressure of the injection zone(s).** Test procedures shall be pre-approved in writing by the Director. The Director will specify in writing, to the permittee, any increase or decrease to the injection pressure based upon the test results and/or other parameters reflecting actual injection operations. On the basis of a step-rate test of the injection zone performed on September 29, 1994, the initial injection pressure, measured at the surface, shall not exceed **2,400 psig.**

5. Injection Volume Limitation. There is no limitation on the number of barrels of fluid per day (BFPD) that shall be injected into this well, or the cumulative number of barrels injected, provided that in no case shall injection pressure exceed that limit shown in Part II, Section C. 4. (b) of this permit.

6. Injection Fluid Limitation. The permittee is authorized to inject only Class II oil and gas related fluids, and nonhazardous industrial waste fluids as approved by the Director and listed in Appendix D. On-site storage or injection of any hazardous waste as identified by EPA under 40 CFR 261.3 is prohibited.

Additions to the list in Appendix D shall be made a binding part of this permit following the procedures outlined below:

For Class II fluid sources or other fluid sources which are exempt from RCRA Subtitle C:

- a) Request that a new source of fluid be accepted for disposal. Include the source name, location, operator, type of operation, and nature of fluid and reason waste is believed to be exempt.
- b) The request shall be accompanied by a Standard API analysis for oil field water.
- c) Any approval for injection may be granted verbally, with subsequent written approval from the Director.

For nonhazardous fluid sources:

- a) Request that a new source of fluid be accepted for disposal. Include the source name, location, operator, type of operation, name of process that generated the waste, and brief description of the nature of the fluid.
- b) Since these wastes are not exempted, include an analysis of the fluids (standard cations and anions), including Corrosivity, Toxicity (using EPA Method 624), Ignitability, Reactivity, chromium, lead, and cadmium.
- c) If there are pesticides or herbicides stored, used or manufactured on site, the waste fluids must be analyzed for such compounds using an approved EPA Method.
- d) Injection shall not take place without prior approval by the Director. This approval for injection may be granted verbally, with subsequent written approval from the Director.

7. Annular Fluid. The annulus between the tubing and the casing shall be maintained full of fresh water treated with a non-toxic corrosion inhibitor, or other fluid as approved, in writing, by the Director. **The operator shall provide EPA with a record of the date, time and volume of corrosion inhibitor added to the annulus. This record shall be included in the quarterly report which follows addition of inhibitors.**

D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Injection Well Monitoring Program. The permittee shall utilize the applicable analytical methods described in 40 CFR 136.3, or in Appendix III of 40 CFR Part 261, or in certain circumstances, by other methods that have been approved by the EPA. Samples and measurements shall be representative of the monitored activity. Monitoring shall consist of:

- (a) FOR FLUIDS WHICH MAY VARY IN CHEMICAL COMPOSITION. Analysis of industrial waste fluids is to be performed prior to delivery to on-site storage tanks at the well site. Fluid samples shall be analyzed for Ph, conductivity, radiological, and biological parameters. At least one load in four must be screened for toxics using EPA Method 624, and analyzed for standard cations and anions. If, however, the analyses of four (4) loads from the same source indicates the material is not hazardous and the quality has little variability, the Director may waive the requirement for analyzing every load. Subsequent to this waiver, a minimum sampling schedule will be established by the Director.
- (b) FOR FLUIDS ASSOCIATED WITH A SPECIFIC PROCESS, WHICH DO NOT VARY IN CHEMICAL COMPOSITION. Prior to being commingled with other fluids, analysis of industrial waste fluids received at the well site is to be performed at least once per quarter. Fluid samples shall be analyzed for standard anions and cations, including Ph and conductivity, and radiological constituents, and for toxicity using EPA Method 624. If, however, the analyses of the quarterly samples shows significant variability in chemical composition, the frequency of analyses may be increased to that specified in item (a) above.
- (c) Analysis of commingled injection fluids prior to injection is to be performed at random, but not less than once every three months, for total dissolved solids, Ph, specific gravity, specific conductivity, major cations and anions, oil and grease, and total organic carbon.
- (d) Sampling requirements in paragraphs (a), (b), and (c) above, may be modified as a minor permit modification after a review of the first quarter of data.

- (e) Continuous monitoring of flow rate to be recorded on a continuous recording device. Daily observation of the well head flow meter shall be made and compared to continuous recording device readings as a means of assuring the accuracy of the continuous recording device. The permittee shall report the minimum and maximum daily injection rate for each month and the day on which it occurred. Cumulative volume shall be measured by a non-resettable volume totalizer.
- (f) Continuous monitoring of injection pressure and casing/tubing annulus pressure to be recorded on a continuous recording device. Daily observations of the wellhead pressure gauges shall be made as a means of assuring the accuracy of the continuous recording device. The permittee shall report the minimum and maximum daily injection pressure and annulus pressure for each month and the day on which each occurred. The monthly average injection pressure and annulus pressure shall also be reported. The time, date, volume of the addition of any annular fluid will be reported. **If there is an increase in annulus pressure of more than 300 psi, the operator must assess the well's operation to determine if a loss of mechanical integrity has occurred or if the change is due to a change in injection fluid rate or temperature. EPA must be notified within 24 hours. If the pressure change cannot be explained by the well's operating procedure, a mechanical integrity test will be run. The criteria for monitoring the annulus will be evaluated after at least six months of data has been collected. If warranted by the results of this review, a change in the annulus pressure requirement or the failure criteria may be made as a minor modification of the permit.**
- (g) Analysis of Class II oil field water intended for injection shall be performed prior to delivery to on-site storage tanks according to the procedure described in Part II, Section C. 6. Injection Fluid Limitation.
- (h) The permittee is required to record and retain records concerning: (1) the location, date and time, nature of source activity, type and volume of fluids picked up for transport to the injection well, and (2) the nature and composition of the fluids.

2. Monitoring Information. Records of any monitoring activity required under this permit shall include:

- (a) The date, exact place, the time interval of sampling, monitoring, or field measurements;
- (b) The name of the individual(s) who performed the sampling or measurements;
- (c) The exact sampling method(s) used to take samples along with quality assurance methods (i.e., chain-of-custody, etc.);
- (d) The date(s) laboratory analyses were performed;
- (e) The name of the individual(s) who performed the analyses;
- (f) The analytical techniques or methods used by laboratory personnel; and
- (g) The results of such analyses.

3. Recordkeeping.

- (a) The permittee shall retain records concerning:
 - (i) the nature and composition of all injected fluids until three (3) years after the completion of plugging and abandonment which has been carried out in accordance with the Plugging and Abandonment Plan shown in Appendix C, and is consistent with 40 CFR 146.10.
 - (ii) all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit for a period of at least five (5) years from the date of the sample, measurement or report throughout the operating life of the well.
- (b) The permittee shall continue to retain such records after the retention period specified in paragraphs (a) (i) and (a) (ii) unless he delivers the records to the Director or obtains written approval from the director to discard the records.

- (c) The permittee shall maintain copies (or originals) of all pertinent records at the office of Arrow Mud, P.O. Box 127, Whiterocks, Utah 84085.

4. Reporting of Results. The permittee shall submit Quarterly Reports to the Director summarizing the results of the monitoring required by Part II, Section D. 1. (a), (b), (c), (d), (e), (f) and (g) of this permit. Copies of all records on injected fluids, and any major changes in characteristics or sources of injected fluid shall be included in the Quarterly Report.

The first Quarterly Report shall cover the period from the effective date of the permit through the end of that quarter. Subsequently, the Quarterly Reports shall cover the period from January 1 through March 31; April 1 through June 30; July 1 through September 30; and October 1 through December 31. Each Quarterly Report shall be submitted to the Denver Office by the 15th of the following month. Appendix B contains Form 7520-8 which may be copied and used to submit the quarterly summary of monitoring.

E. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. the permittee shall notify the Director forty-five (45) days before abandonment of the well.

2. Plugging and Abandonment Plan. The permittee shall plug and abandon the well as provided in the Plugging and Abandonment Plan, Appendix C. This plan incorporates information supplied by the permittee and may contain a clarification by the EPA. The EPA reserves the right to change the manner in which the well will be plugged if the well is modified during its permitted life, or if the well is not made consistent with EPA requirements for construction and mechanical integrity. The Director may require the permittee to update the estimated plugging cost, based upon costs which a third party would incur to plug the well according to the plan, and a revised demonstration of financial responsibility if necessary.

3. Cessation of Injection Activities. After a cessation of operations of two (2) years, the permittee shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, unless the permittee:

- (a) has provided notice to the Director; and
- (b) has demonstrated that the well will be used in the future; and

- (c) has described actions or procedures, satisfactory to the Director, that will be taken to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment.

4. Plugging and Abandonment Report. Within sixty (60) days after plugging the well, the permittee shall submit a report on form 7520-13 to the Director. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan; or (2) where actual plugging differed from the plan, a statement that specifies the different procedures followed.

F. FINANCIAL RESPONSIBILITY

1. Demonstration of Financial Responsibility. The permittee is required to maintain continuous financial responsibility and resources to close, plug and abandon the injection well as provided in the plugging and abandonment plan. The permittee may submit a written request to EPA to change the type of financial mechanism or instrument utilized. A change in demonstration of financial responsibility must be approved in writing by the Director.

2. Insolvency of Financial Institution. In the event that an alternate demonstration of financial responsibility has been approved, the permittee must submit an alternate demonstration of financial responsibility acceptable to the Director within sixty (60) days after either of the following events occur:

- (a) The institution issuing the trust or financial instrument files for bankruptcy; or
- (b) The authority of the trustee institution to act as trustee, or the authority of the institution issuing the financial instrument, is suspended or revoked.

3. Cancellation of Demonstration by Financial Institution. The permittee must submit an alternative demonstration of financial responsibility acceptable to the Director, within sixty (60) days after the institution issuing the trust or financial instrument serves 120-day notice to the EPA of their intent to cancel the trust or financial instrument.

PART III. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, as authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR, Part 142 or otherwise adversely affect the health of persons. Any underground injection activity not authorized in this permit or otherwise authorized by permit or rule is prohibited. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of the private rights, or any infringement of State or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA), 42 USC § 300i, or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health, or the environment, nor does it serve as a shield to the permittee's independent obligation to comply with all UIC regulations.

B. PERMIT ACTIONS

1. Modification, Reissuance, or Termination. The Director may, for cause or upon a request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR Sections 124.5, 144.12, 144.39, and 144.40. Also, the permit is subject to minor modifications for cause as specified in 40 CFR Section 144.41. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

2. Conversions. The Director may, for cause or upon a request from the permittee allow conversion of the well from a Class V injection well to a non-Class V well. Requests to convert the injection well from its Class V status to a non-Class V well, such as, a production well, must be made in writing to the Director. Conversion may not proceed until a permit modification indicating the conditions of the proposed conversion is received by the permittee. Conditions of the modification may include such items as, but is not limited to, approval of the proposed well rework, follow up demonstration of mechanical

integrity, and well specific monitoring and reporting following the conversion.

3. Transfers. This permit is not transferrable to any person except after notice is provided to the Director and the requirements of 40 CFR 144.38 are complied with. The Director may require modification, or revocation and reissuance, of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

4. Operator Change of Address. Upon the operator's change of address, notice must be given to the appropriate EPA office at least fifteen (15) days prior to the effective date.

C. SEVERABILITY

If any provision of this permit or the application of any provision of this permit to any circumstance is stayed or held invalid, all remaining provisions of this permit shall remain fully effective and enforceable, except for those provisions which are not severable from the stayed or invalid provision.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). EPA will deny claims of confidentiality including but not limited to the following information:

- The name and address of the permittee; and
- Information which deals with the existence, absence, or level of contaminants in drinking water.

E. GENERAL DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit, except to the extent and for the duration that such noncompliance is authorized by an emergency permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, or modification. Such noncompliance

may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA).

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to the RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. All surface piping and storage tank leakage must be promptly repaired and notification of action taken reported to EPA. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance and procedures. This provision requires the operation of back-up, or auxiliary facilities or similar systems, only when necessary, to achieve compliance with the conditions of this permit.

6. Duty to Provide Information. The permittee shall furnish the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with the permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA any substances or parameters at any location.

8. Records of Permit Application. The permittee shall maintain records of all data required to complete the permit application and any supplemental information submitted for a period of five (5) years from the effective date of this permit. This period may be extended by request of the Director at any time.

9. Signatory Requirements. All reports or other information requested by the Director shall be signed and certified according to 40 CFR 144.32.

10. Reporting of Noncompliance.

- (a) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (b) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than thirty (30) days following each schedule date.
- (c) Twenty-four Hour Reporting.
 - (i) The permittee shall report to the Director any noncompliance which may endanger health or the environment. Information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning EPA at (303) 293-1413 (during normal business hours) or at (303) 293-1788 (for reporting at all other

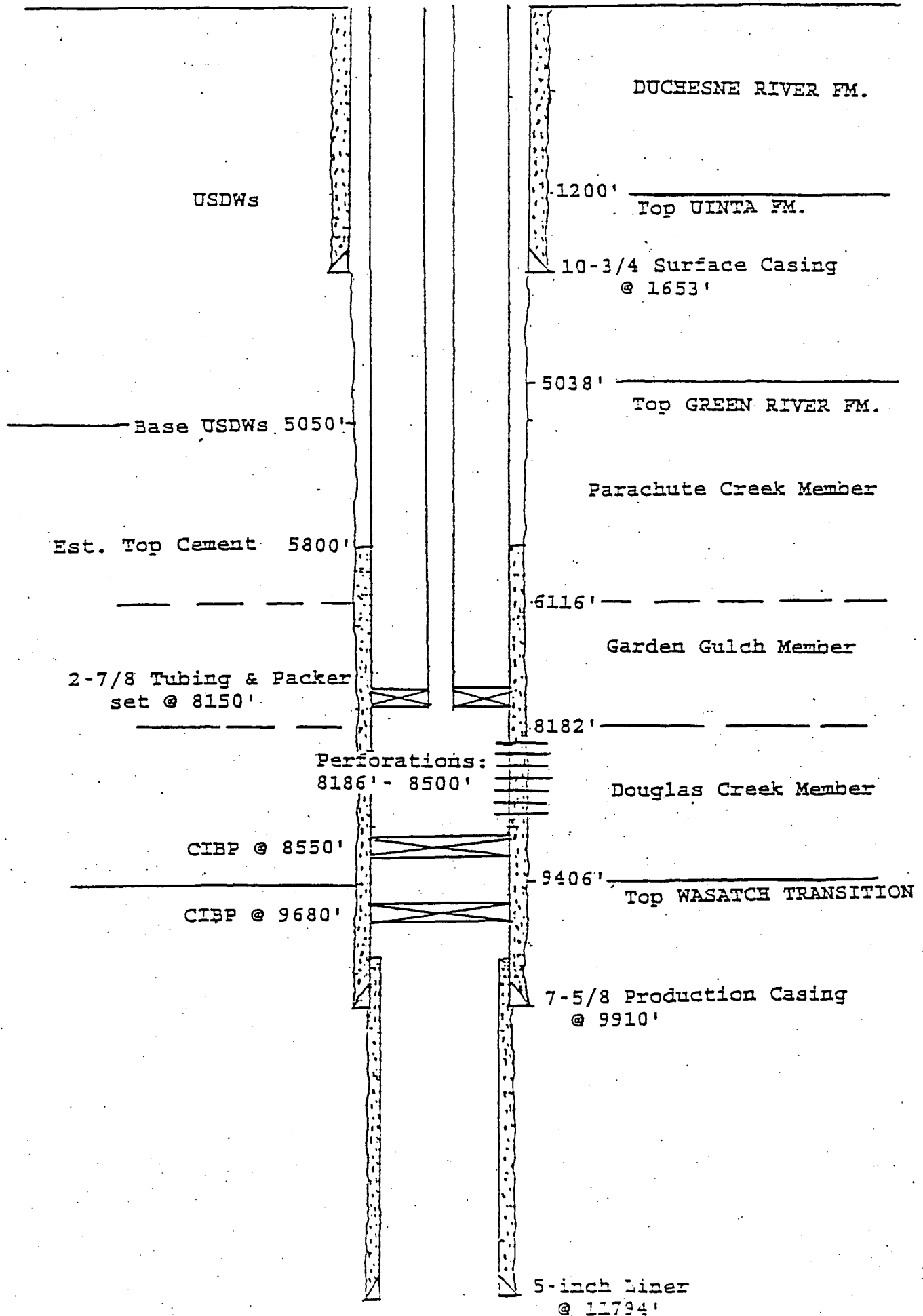
times). The following information shall be included in the verbal report:

- (A) Any monitoring or other information which indicates that any contaminant may cause endangerment to an underground source of drinking water.
 - (B) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.
- (ii) A written submission shall also be provided to the Director within five (5) days of the time the permittee becomes aware of the potential for endangerment to health or the environment. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- (d) Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part III, Section E. 10. (c) (ii) of this permit.
- (e) Other Information. Where the permittee becomes aware that any relevant facts were not submitted in the permit application, or incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such correct facts or information within two (2) weeks of the time such information becomes known.

APPENDIX A (CONSTRUCTION DETAILS)

Conversion operations for the Ute #1-14B1E will consist of the following:

- 1) Set a cast iron bridge plug (CIBP) in the 7-5/8 inch casing at 9,680 feet (25 feet above the top of the 5-inch liner) and cap with 10 sacks of cement;
- 2) Run a CBL from 8,700 to 5,000 feet to evaluate the condition of cement behind casing and verify top of cement; perform remedial cementing if necessary;
- 3) Set a cast iron bridge plug (CIBP) in the 7-5/8 inch casing at 8,550 and cap with 10 sacks of cement;
- 4) Obtain uncontaminated water sample from perforated intervals in the injection zone; record water level and swab at least three tubing volumes of the tubing and the casing between the packer and bridge plug prior to sampling;
- 5) Run 2-7/8 inch tubing and packer and set at 8,150 feet;
- 6) Pressure test tubing/casing annulus above packer to 1,250 psi and conduct remedial work if necessary;
- 7) Fill tubing/casing annulus with fresh water, treated for oxygen, bacteria, and scale;
- 8) Nipple up wellhead and pressure test annulus to 1,250 psi;
- 9) Perform injection test to determine efficacy of perfs and remediate if necessary; and
- 10) Prepare and submit stimulation plan if warranted.



APPENDIX B (REPORTING FORMS)

1. EPA Form 7520- 7: APPLICATION TO TRANSFER PERMIT
2. EPA Form 7520- 8: INJECTION WELL MONITORING REPORT
3. EPA Form 7520-10: COMPLETION REPORT FOR BRINE DISPOSAL
WELL
4. EPA Form 7520-12: WELL REWORK RECORD
5. EPA Form 7520-13: PLUGGING RECORD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

APPLICATION TO TRANSFER PERMIT

NAME AND ADDRESS OF EXISTING PERMITTEE

NAME AND ADDRESS OF SURFACE OWNER

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES

N									
S									

W E

STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF

¼ OF

¼ SECTION

TOWNSHIP

RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface

Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY

WELL STATUS

TYPE OF PERMIT

☐ Class I☐ Operating☐ Individual☐ Class II☐ Modification/Conversion☐ Area☐ Brine Disposal☐ Proposed

Number of Wells ____

☐ Enhanced Recovery☐ Hydrocarbon Storage☐ Class III☐ Other

Lease Name

Well Number

NAME(S) AND ADDRESS(ES) OF NEW OWNER(S)

NAME AND ADDRESS OF NEW OPERATOR

Attach to this application a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them.

The new permittee must show evidence of financial responsibility by the submission of surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the director.

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)

SIGNATURE

DATE SIGNED



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

INJECTION WELL MONITORING REPORT

Form Approved
OMB No. 2000-0042
Approval expires 9-30-86

YEAR	MONTH	MONTH	MONTH
Injection Pressure (PSI)			
Injection Rate (Gal/Min)			
Annular Pressure (PSI)			
Injection Volume (Gal)			
Temperature (F°)			
pH			
Other			
Name and Address of Permittee			Permit Number
Name and Official Title (Please type or print)		Signature	Date Signed



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

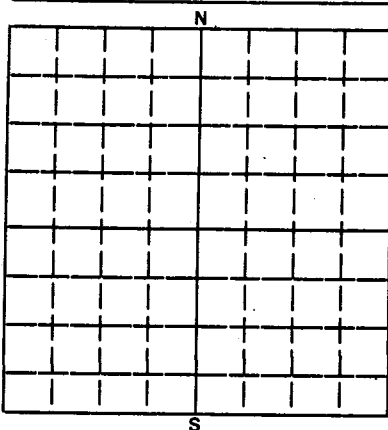
Form Approved
OMB No. 2040-0042
Approval expires 9-30-86

COMPLETION REPORT FOR BRINE DISPOSAL, HYDROCARBON STORAGE, OR ENHANCED RECOVERY WELL

NAME AND ADDRESS OF EXISTING PERMITTEE

NAME AND ADDRESS OF SURFACE OWNER

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES



STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

1/4 OF

1/4 OF

1/4 SECTION

TOWNSHIP

RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface

Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY

TYPE OF PERMIT

☐ Brine Disposal

☐ Individual

☐ Enhanced Recovery

☐ Area

☐ Hydrocarbon Storage

Number of Wells ____

Estimated Fracture Pressure
of Injection Zone

Anticipated Daily Injection Volume (Bbls)

Injection Interval

Average

Maximum

Feet

to Feet

Anticipated Daily Injection Pressure (PSI)

Depth to Bottom of Lowermost Freshwater Formation
(Feet)

Average

Maximum

Type of Injection Fluid (Check the appropriate block(s))

☐ Salt Water

☐ Brackish Water

☐ Fresh Water

☐ Liquid Hydrocarbon

☐ Other

Lease Name

Well Number

Name of Injection Zone

Date Drilling Began

Date Well Completed

Permeability of Injection Zone

Date Drilling Completed

Porosity of Injection Zone

CASING AND TUBING

CEMENT

HOLE

OD Size

Wt/Ft — Grade — New or Used

Depth

Sacks

Class

Depth

Bit Diameter

INJECTION ZONE STIMULATION

WIRE LINE LOGS, LIST EACH TYPE

Interval Treated

Materials and Amount Used

Log Types

Logged Intervals

Complete Attachments A — E listed on the reverse.

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

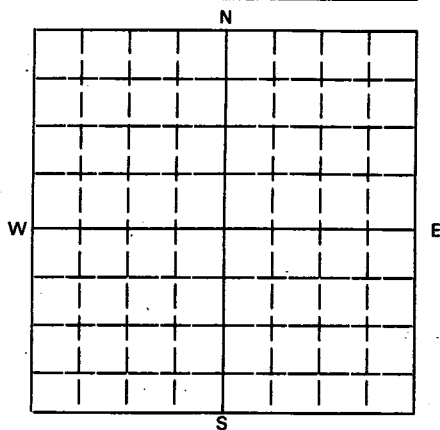
NAME AND OFFICIAL TITLE (Please type or print)

DATE SIGNED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460**WELL REWORK RECORD**

NAME AND ADDRESS OF PERMITTEE

NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES

STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF

¼ OF

¼ SECTION

TOWNSHIP

RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface

Location _____ ft. from (N/S) _____ Line of quarter section

and _____ ft. from (E/W) _____ Line of quarter section

WELL ACTIVITY

- ☐ Brine Disposal
☐ Enhanced Recovery
☐ Hydrocarbon Storage

Lease Name

Total Depth Before Rework

Total Depth After Rework

Date Rework Commenced

Date Rework Completed

TYPE OF PERMIT

- ☐ Individual
☐ Area
 Number of Wells _____

Well Number

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

WELL CASING RECORD — AFTER REWORK (Indicate Additions and Changes Only)

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL
USE ADDITIONAL SHEETS IF NECESSARY**WIRE LINE LOGS, LIST EACH TYPE**

Log Types

Logged Intervals

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE (Please type or print)

SIGNATURE

DATE SIGNED



PLUGGING RECORD

NAME AND ADDRESS OF PERMITTEE

NAME AND ADDRESS OF CEMENTING COMPANY

LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES

STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

1/4 OF

1/4 OF

1/4 SECTION

TOWNSHIP

RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface

Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

TYPE OF AUTHORIZATION

- ☐ Individual Permit
☐ Area Permit
☐ Rule

Number of Wells ____

Lease Name

Describe in detail the manner in which the fluid was placed and the method used in introducing it into the hole

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE

WELL ACTIVITY

- ☐ CLASS I
☐ CLASS II
☐ Brine Disposal
☐ Enhanced Recovery
☐ Hydrocarbon Storage
☐ CLASS III

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☐ The Balance Method
☐ The Dump Bailer Method
☐ The Two-Plug Method
☐ Other

CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)							
Depth to Bottom of Tubing or Drill Pipe (ft.)							
Sacks of Cement To Be Used (each plug)							
Slurry Volume To Be Pumped (cu. ft.)							
Calculated Top of Plug (ft.)							
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)							
Type Cement or Other Material (Class III)							

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS

From	To	From	To

Signature of Cementer or Authorized Representative

Signature of EPA Representative

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
(REF. 40 CFR 122.22)

NAME AND OFFICIAL TITLE (Please type or print)

SIGNATURE

DATE SIGNED

APPENDIX C (PLUGGING & ABANDONMENT PLAN)

PLUGGING AND ABANDONMENT PLAN

The plugging and abandonment plan consists of five (5) plugs with the following specifications. All voids between plugs shall be filled with drilling mud.

- Plug #1: Within the 7-5/8 inch long string casing, set a Class G cement plug across the injection interval from 8,100 feet to 8,500 feet.
- Plug #2: Perforate the 7-5/8 inch long string casing at 5,100 feet for a cement squeeze behind casing from 5,050 to 5,100 feet. Use sufficient quantities of Class G cement to leave a 50-foot cement plug inside the casing.
- Plug #3: Perforate the 7-5/8 inch long string casing 50 feet below the 10-3/4 inch surface casing shoe for a cement squeeze of the annulus between the long string casing and borehole, extending upward to 50 feet above the surface casing shoe, between the surface/long string casings. Use sufficient quantities of Class G cement to leave a 100-foot cement plug inside the 7-5/8 inch long string casing.
- Plug #4: Within the 7-5/8 inch long string casing, place a 50 sack plug of Class G cement from the surface to 200 feet.
- Plug #5: Within the 10-3/4 inch surface casing, place a 50 sack plug of Class G cement from the surface to 200 feet.

APPENDIX D (INJECTION FLUID SOURCES)

Class II (exempt)

Class V (nonexempt)

Class II Fluid Sources (exempt)

None listed to date

Class V Sources

Nonhazardous Industrial Fluids

None listed to date

RESPONSIVENESS SUMMARY

ARROW MUD UTE #1-14B1E
CLASS V NONHAZARDOUS INDUSTRIAL WASTE INJECTION WELL
EPA PERMIT No. UT5645-03728

RESPONSE TO ISSUES AND COMMENTS:

The comments listed below were received following the issuance of the Class V draft permit for the Ute #1-14B1E well on May 26, 1994. Additional comments are also included which were submitted at a subsequent public hearing held on August 23, 1994:

COMMENT #1: Request for a public hearing. Two written requests for a public hearing were received regarding the issuance of a Class V permit to Arrow Mud for the disposal of nonhazardous industrial waste.

RESPONSE: EPA conducted a public hearing during the evening of August 23, 1994, concerning the issuance of a Class V permit to Arrow Mud. The hearing was held at the Uintah Basin Applied Technology Center in Roosevelt, Utah; seven (7) people attended the hearing.

COMMENT #2: Well Classification. "This well is really a Class I well in sheep's clothing." Although they don't meet EPA's definition of hazardous waste, wastes could be injected that are every bit as hazardous as some other types of hazardous waste that have to be disposed at hazardous waste management facilities. Some examples of wastes that could be injected are exempted wastes such as contaminated ground water from underground storage tank leaks involving petroleum products, even if compounds are present at levels which would normally make them a hazardous waste (i.e., benzene, carbon tetrachloride, chlordane, trichloroethylene, tetrachloroethylene, pyridine, nitrobenzene, and methyl ethylketone, etc.). Some other exempted wastes that could be injected are process wastewaters from coal gasification and hydrofluoric acid and phosphoric acid production, etc.

Wastes could also be injected that are highly corrosive or that have a concentration of only one part per billion lower than the definition of a hazardous waste (i.e., 4.999 mg/l of arsenic, chromium or lead, 9.999 mg/l of 2,4-D or methoxychlor, 0.999 mg/l cadmium, or .199 mg/l mercury, etc.). We prefer that such wastes be sent to a facility designed specifically to handle such contaminants.

RESPONSE: Arrow Mud originally requested that a Class I permit be issued for the disposal of nonhazardous industrial waste. Following the issuance of a Class I draft permit, comments received suggested the possible existence of underground sources of drinking water (USDWs) below the proposed injection zone within 1/4-mile of the well; therefore, the permit is being re-

issued as a Class V permit. A Class I permit is only issued for wells which inject into formations which are below the lowermost USDW in a well. A well which injects above or into a USDW, however, is defined as a Class V well. The possibility that water quality changes in the Wasatch oil reservoir underlying the injection zone, and that the reservoir could provide sufficient well yields, resulted in the reservoir being defined as a USDW. This led to the decision to define this well as a Class V injection well. This change in well classification was discussed with the Utah Department of Environmental Quality who concurred with the concept. Although Class V wells are authorized by rule, EPA made a decision under CFR 40 §144.25 that a permit would be required, and the operator was asked to apply for a permit prior to commencing injection as a Class V well. The criteria for permitting this Class V well are identical to those used for permitting nonhazardous Class I wells. As with a Class I, this permit will authorize the Ute #1-14B1E to dispose of nonhazardous industrial fluids, as well as Class II fluids. The permittee intends the major portion of injection fluids to be produced oil field waters (Class II), with lesser amounts of nonhazardous industrial fluids (Class V). The industrial waste fluids proposed for disposal will be those associated with the exploration, development, production, refining, and transportation of crude oil, natural gas, or geothermal energy, and possibly drilling fluids, pipeline and tank discharges, and used oil or lubricants, plus additional fluids, as long as they are determined to be nonhazardous by EPA. The sources of these fluids will be petroleum companies, industrial facilities, public utilities, the Ute Indian Tribe, and possibly household waste collection programs. Only fluids which meet RCRA specifications as nonhazardous will be authorized for injection. Additional testing procedures have been incorporated in the permit (see Comment #11).

COMMENT #3: Injection above a USDW. The proposed injection zone is located above an underground source of drinking water (USDW) as defined by EPA. Although it may or may not be used in the future, we need to be very cautious in assuring it is protected. Inasmuch as this well is the first of its type in Utah, and we don't want to learn how to appropriately regulate them by mistake, this well should be permitted conservatively.

RESPONSE: The available data base is inadequate to determine if a USDW actually underlies the injection zone within 1/4-mile of the well. The Wasatch reservoir does contain some lenses which have less than 10,000 milligrams per liter (mg/l) total dissolved solids (TDS) as well as lenses containing greater than 10,000 mg/l (non-USDW), but definitive water quality data points are not available for the Wasatch immediately adjacent to the site. Data on the yield of these Wasatch sand stringers to determine if they contain a sufficient quantity of ground water to supply a public water system is also not available. The data did indicate,

however, that it was likely that a lens containing a TDS less than 10,000 mg/l would occur within 1/4-mile of the injection well. To assure that the correct well classification was utilized and USDW's were protected, EPA ruled that the facility met the definition of a Class V well. Although Class V wells are normally rule authorized and can inject without a permit, and water analysis indicates that the injection zone is not a USDW, EPA took a conservative approach and required that the operator obtain a permit. This permit is the equivalent of one which would cover any Class I nonhazardous injection facility. The permit requirement to submit a complete laboratory analysis of fluid wastes proposed for injection, prior to delivery to the well site, will assure that only nonhazardous fluids, as determined by RCRA regulations, will be approved for injection. Only fluids which are determined to be nonhazardous according to CFR 40 §261.3 will be approved for injection. The casing and cementing features of the Ute #1-14B1E well indicate that all injected fluids will remain within the injection zone; continued assurance of this will be provided by periodic mechanical integrity and other type tests, as well as continuous monitoring of the injection operation. No permit changes are considered necessary in regard to this comment.

COMMENT #4: Injection above and below USDWs. Why is injection allowed above or below a known USDW? Is it known what role the formation water plays now, i.e., aquifer source, underground river source, water table stabilizer, etc.?

RESPONSE: Although data indicate there may be USDWs in some portions of the Wasatch Formation which underlies the Green River Formation (see Comments #2 and #3), the shales and clays which separate these two reservoirs are adequate to prevent fluid movement into the Wasatch reservoir. Under the UIC program, a Class V well may inject fluids above or into a USDW. Unlike a typical Class V well, however, water analysis of the injection reservoir indicates a TDS content of 22,653 mg/l, and therefore is not a USDW or a source of water for any beneficial uses. No permit changes are considered necessary in regard to this comment.

COMMENT #5: Water quality of the injection zone. Why shouldn't the injection zone formation water be tested prior to issuing a permit in order to determine the actual water quality, rather than relying on what the water quality is expected to be?

RESPONSE: A water sample of the injection zone was obtained on September 28, 1994; laboratory analysis indicated a TDS content of 22,653 mg/l. Therefore, the injection zone is not an underground source of drinking water, since an USDW is defined as a formation containing water with a TDS content less than 10,000 mg/l, and which produces a sufficient quantity of water to supply a public water system. No change has been made to the permit.

COMMENT #6: Pressure fall-off tests. Pressure fall-off injectivity tests should prove upper and lower confining layers exist before Class V injection of wastes is allowed.

RESPONSE: EPA believes that adequate confining layers do exist above and below the Douglas Creek injection zone which is between the depths of 8,186 and 8,500 feet. These confining layers will assure that all injected fluids remain within the injection zone and will not migrate into any USDWs. The confining zone immediately above the injection interval is the Garden Gulch Member of the Green River Formation which is composed of shale with interbedded siltstones. This confining zone has a thickness of 2,014 feet. The confining zone below the injection interval consists of approximately 900 feet of interbedded shales, claystones, carbonates and sands of the Douglas Creek. The adequacy of this lower confining zone to prevent the movement of fluids is substantiated by the fact that the deeper Wasatch oil reservoir in the well was confined below the Douglas Creek. An initial pressure fall-off test is to be conducted during the initial startup of this Class V well; subsequent tests are to be performed annually. It is important to emphasize, however, that a valid pressure fall-off test can only be run after injection has taken place for a sufficient period of time to allow reservoir conditions to stabilize. The adequacy of the upper and lower confining zone was assessed by reviewing additional well logs during the permitting process. The fall-off tests (especially the subsequent tests) are a means of providing further verification and a means of better predicting the future reservoir pressure changes. No changes will be made to the permit.

COMMENT #7: Other wells within the Area of Review (AOR). The two temporarily abandoned oil wells within a 2 mile radius of the Arrow Mud well should have corrective action taken prior to injection startup. Both are perforated in the injection zone but neither is plugged; no information was provided on the condition of their casing. At a minimum, cast iron bridge plugs should be installed just above the perforations and pressure tested (initially and periodically thereafter). Ideally, they should be permanently plugged and abandoned.

RESPONSE: In permitting this well as a Class V injection well, EPA utilized a 1/2-mile radius area of review (AOR). Within this AOR, there are no other wells. However, within a 2-mile radius as stated above, there are two temporarily abandoned wells located approximately 1-1/2 miles from the Arrow Mud well. These two wells are the Page #1-10B1E and the Exxon Ute Tribal #1. EPA reviewed the construction information for these wells and analyzed the potential pressure effects of the injection well at a radius of 1-1/2 miles. Both the Page and Exxon wells were drilled and completed during the early 1980's; casing strings should be in good condition. Well Completion Reports and

additional data provided by the State of Utah Division of Oil, Gas and Mining indicate the following: The Page #1-10B1E was completed in an interval from 9,926 to 12,354 feet within the Wasatch Formation, and approximately 1,500 feet deeper than the depth of the Douglas Creek injection zone in the Arrow Mud well. Records indicate the long string casing in the Page well to be cemented across the Douglas Creek section. Surface casing set to a depth of 1,998 feet in the well is cemented from the casing shoe back to surface. Thus, the well will not act as a conduit for fluid to move out of the injection zone into USDWs. The Exxon Ute Tribal #1 perforated interval is from 8,161 to 9,518 feet, apparently within the Douglas Creek, and has not been plugged back above the perforations. The quantity of cement used to secure the long string casing in the Exxon Ute Tribal #1 indicates that the casing is cemented from the casing shoe at 10,100 feet back to surface. The surface casing is set to a depth of 2,600 feet and is also cemented to the surface. Thus, fluids will not be able to migrate outside the casing from the injection zone to any USDWs. An analysis of the pressure affects of the Arrow Mud well was performed and indicates there will be an insignificant pressure change over the life of the project at a radius of 1-1/2 miles. Thus, the fluid level within the casing of the Exxon Ute Tribal #1 should not change significantly. Additionally, recent information indicates that this well is to be plugged and abandoned in the near future. Although both of these wells are considered to be beyond the radius of direct influence of the injection well and any pressure increase would be minimal, EPA will review the status of reservoir pressure buildup at least every five years to determine if this assessment is correct. EPA has required the operator to perform an annual pressure fall-off test which will provide a better estimate of reservoir hydraulic conductivity and storativity. This information will be used to recalculate potential reservoir pressure changes over the life of the project. If the wells have not been plugged (plugging of both wells is anticipated in the next year) and the new reservoir pressure calculations indicate that a problem could occur, the permit will be modified to require corrective action. At this time, however, the permittee will not be required to perform any corrective action on either well, and no change will be made to the permit.

COMMENT #8: Mechanical integrity testing. There should be an operational requirement that annular pressure changes in excess (plus or minus) of a certain percentage (i.e., 10%, etc.) of normal are grounds for stopping injection and running a mechanical integrity test. The Fact Sheet indicated that this would be done, but it is not required in the permit. Further, an alarm and/or pump shut-off interlock should be installed to facilitate the above.

RESPONSE: This operational requirement concerning annular pressure changes was inadvertently left out of the draft permit, but is incorporated in the final permit. In addition to the continuous monitoring of injection pressure, flow rate, volume, and annulus pressure, a pump shut-off interlock shall be a permit condition in order to prevent the surface injection pressure from exceeding 2,400 psig. The annulus pressure monitoring should not be confused as a substitute for regular mechanical integrity testing. The annular monitoring is intended to provide a means of continuously assessing the down hole conditions in the well. Although the annular monitoring can detect down hole problems such as a tubing leak, a ten percent (10%) change in pressure during well operation is not usually indicative of a loss in mechanical integrity. Small changes in temperature or injection pressure or frequent stopping and starting of injection can result in annular pressure changes of several hundred pounds. For example, a well utilizing 2-7/8 inch tubing in 7 inch casing set in an 8 inch well bore with a packer set at 6,000 feet and injecting water of 65° F; if the injection temperature were to increase to 80° F, then an annulus pressure increase of 390 psi is expected. Setting a shut-off criteria of 10% of the annulus pressure in such a situation could lead to numerous unnecessary shut downs. EPA has modified the permit to require the operator to evaluate the well's operation and the potential for a loss in mechanical integrity, if the annulus pressure change exceeds 300 psi. If the pressure change criteria is exceeded, the well will be shut-in and EPA notified. The annulus pressure and operational records will be analyzed to determine if the change can be explained. If the pressure change can not be related to a change in operation, such as temperature, an MIT will then be run on the well. The permit has also been modified to require that the annulus be initially pressured up to at least 300 psi, when injection commences. After one year of operation, the annular pressure data will be evaluated to determine if changes in the annulus pressure criteria are warranted.

COMMENT: #9 Operating annulus pressure. Operating annulus pressure was specified in the draft permit as 200 psig, while operating injection pressure is allowed to reach 1,250 psig. The permit should require annulus fluid absolute pressure to exceed injectate absolute pressure by a significantly higher amount at any given depth. A minimum 100 psi differential was suggested by the GWPC's recent workshop on Class I injection wells, which could be reasonably applied to this well.

RESPONSE: The suggestion that the annulus pressure criteria be modified to require that at least 100 psi in excess of the injection pressure be maintained is not considered to be necessary in this situation. Although the suggested change would assure that if there was a tubing or packer leak, the annulus fluid would enter the tubing and no injectate would enter the well bore, such a requirement would make it impossible to

evaluate daily pressure readings and detect a downhole leak. Systems which are designed to maintain a certain minimum pressure over the injection pressure generally are adjusted with a computer to maintain a constant pressure gradient between the annulus and tubing. If the well is injecting at no more than 1,200 psi and the annulus is required to have 1,300 psi, a tubing failure would be very difficult to detect because of all the operational affects (such as temperature which could affect the pressure, see response to comment #8). Detection of a downhole leak would mainly be possible after review of data regarding the addition of annulus fluid. Because the fluid presently proposed for injection is not highly corrosive, contact with the long string casing for a short period of time is not considered a problem. Thus, the Region is taking the option of requiring the annulus to be pressured up to 300 psi prior to commencement of injection. This will provide adequate operating range to assure that the annulus pressure is always positive. It will also allow for immediate detection of a tubing or pressure failure, without any confusion due to operational affects on pressure. As indicated in the response to Comment #8, the Region will review the operating data after one year and the information on injectate quality to determine if changes in annulus pressure are needed.

COMMENT #10: Plugging and abandonment costs. It is not clear that \$8,000 is adequate to properly plug and abandon the well. The number seems low for costs which include removing tubing/packer, installation of a cast iron bridge plug, two squeeze jobs, equipment/pipe rental, cement and mud costs, labor and transportation costs, etc.

RESPONSE: The permit provides for revisions of plugging and abandonment costs, if necessary. In order to ensure that the amount of the Surety Performance Bond currently in place is adequate to cover the cost of plugging the Ute #1-14B1E well, the permittee has been instructed to obtain a revised plugging and abandonment cost estimate. If an increase in cost for plugging the well is indicated, the permittee will be required to adjust the amount of the Bond accordingly.

COMMENT #11: Quality assurance plan. In order to assure that a generator does not send hazardous waste for injection, a quality assurance plan that involves random waste sampling/analysis (prior to commingling) of all types of wastes accepted by the permittee should be developed and submitted to the Director for approval. Further, analysis parameters for all samples should include the "F-listed" hazardous waste solvents F001-F005 (see 40 CFR 261.31).

RESPONSE: EPA believes the present permit requirements for fluid sampling and analysis specified Part II, Section C. 6. Injection Fluid Limitation, and in Part II, Section D. 1. Injection Well

Monitoring Program of the permit will provide adequate assurance for preventing the transport of hazardous waste by a generator to the well site for injection. Prior to receiving permission to accept a new waste, information on the type of processes associated with the waste water must be submitted to EPA. This will be used to determine if listed wastes, such as solvents (F001-F005), might be present. The requirement to submit a complete laboratory analysis of fluid wastes proposed for injection, prior to delivery to the well site, will assure that only nonhazardous fluids, as determined by RCRA regulations, will be approved for injection. This analysis shall include tests for corrosivity, toxicity (using EPA Method 624), ignitability, reactivity, chromium, lead, and cadmium. Method 624 will detect several of the common solvents (which are also F-listed wastes), but additional testing may be required if warranted by the process information. Only fluids which are determined to be nonhazardous according to CFR 40 §261.3 will be approved for injection. After one year of operation, the Region will review the sampling and analysis data to determine if modifications to the permit are needed. Injection shall not take place without prior approval by the Director; approval may be granted verbally, with subsequent written approval from the Director. More stringent sample analysis criteria have been incorporated in the permit.

COMMENT #12: Authorization to Inject. "Part I. Authorization to Inject", the 5th paragraph, states "The State of Utah ... may apply for primacy enforcement responsibility of the UIC program and may, if qualified, assume primary responsibility for regulating this permittee." Utah already has primacy. Further, the latter part of the sentence seems to be contrary to EPA's earlier representations regarding their jurisdiction.

RESPONSE: Although the State of Utah has been granted primacy for Class I, III, IV and V wells for State, private and Federal lands, this does not include primary authority for the UIC program on Indian lands. When the State's application for primacy was filed, Utah did not assert jurisdiction over Indian lands and did not request primary enforcement responsibility for those lands. The Arrow Mud Ute #1-14B1E is located on allotted Tribal lands within the boundaries of the Uintah and Ouray Indian Reservation. Section 147.2253 of Subpart TT, 40 Code of Federal Regulations authorized EPA to administer the UIC program for all classes of injection wells on Indian lands in the State of Utah, effective November 25, 1988. "Indian lands" is defined as all land within the exterior boundaries of an Indian Reservation. Although the State could assume primacy if they could demonstrate legal authority over all Indian lands within the boundaries of the Reservation, no demonstration has been made and there has been no indication that such an application will be forthcoming. Changes to the UIC Regulations on September 26, 1988 (40 CFR §145.1) also established a mechanism whereby primary enforcement

responsibility for the UIC program for Indian lands could be delegated to the Tribal Government. If an application for primary enforcement responsibility is received from the Tribe and primacy is granted, this permit could be adopted and enforced as a Tribal Government permit. The wording in the permit regarding the issue of primacy has been revised to reflect the above.

COMMENT #13: Monitoring Wells in the Area of Review (AOR). The draft permit did not require any underground source of drinking water (USDW) monitoring. It would seem prudent to require some USDW monitoring (background and post-injection) in order to determine whether injectate or formation fluids were in fact getting past the confining zone(s) or well casing above the confining zone(s). USDW monitoring should be a permit requirement, with analyzed parameters reflecting injectate contaminants, especially in light of the fact that there appears to be approximately 3400 feet of uncemented casing adjacent to the USDW.

RESPONSE: Based on a site-specific assessment of the facility, EPA believes that monitoring wells are not necessary for the following reasons: 1) the injection zone, between the depths of 8,186 and 8,500 feet (Douglas Creek Member of the Green River Formation), is overlain and underlain by adequate thicknesses of confining layers which will assure that all injected fluids remain within the injection zone and not migrate into USDWs. The confining zone immediately above the injection interval is the Garden Gulch Member of the Green River which is composed of shale with interbedded siltstones. This specific confining zone has a thickness of 2,014 feet. There is a total thickness of 3,100 feet of confining material and non-USDW's between the top of the injection zone and the base of USDW's at 5,050 feet. A review of the information covering this entire interval indicates that the top of the injection zone is adequately confined. The confining zone below the injection interval consists of approximately 900 feet of interbedded shales, claystones, carbonates, and sands of the Douglas Creek Member; 2) the long string casing/bore hole annulus is cemented throughout the vertical extent of the injection interval and the upper and lower confining zones, being cemented from the casing shoe at 9,910 feet, up to a depth of 5,800 feet. Furthermore, the permit requires that during the conversion of the well for injection a cement bond log (CBL) is to be run in order to verify the integrity of cement. Remedial cementing behind the casing shall be performed if considered necessary. The operator is also required to run periodic temperature logs and radioactive tracer surveys to assure there is no flow adjacent to the casing; 3) initial and periodic mechanical integrity tests will be conducted in the well in order to assure that all injected fluids enter and remain confined within the injection interval; 4) the permit requires that pressure fall-off tests of the injection zone be performed on an annual basis. The purpose of these tests is to monitor pressure

buildup in the injection zone in order to detect any significant loss of fluids due to fracturing in the injection and/or confining zones, and to aid in determining the lateral extent of the injection plume; 5) the "3,400 feet of uncemented casing adjacent to the USDW" stated in the comment above refers to the uncemented portion of the long string casing between the surface casing shoe at 1,653 feet and the base of the USDW at 5,050 feet. This is not considered significant, since the long string casing is cemented throughout the upper confining zone, some 2,400 feet above the injection perforations. Thus, the movement of fluids from non-USDWs into USDWs adjacent to the casing would be precluded; and 6) although the underlying Wasatch oil reservoir apparently contains some sand lenses which contain water with less than 10,000 mg/l of total dissolved solids, the locations of such lenses relative to those containing greater than 10,000 mg/l is unknown. The withdrawal of oil from this zone is causing water quality throughout the zone to change with time. Thus, the variability of water quality, the presence of natural hydrocarbons, and the ongoing changes of quality within the zone would make interpretation of any monitoring data difficult, if not impossible. No changes will be made to the permit regarding USDW monitoring.

COMMENT #14: Surface spills of wastes. What measures will be taken to insure that nonhazardous wastes spilled at the surface do not contaminate irrigation ditches and the nearby Uinta River? Waste spillage could damage crops and endanger wildlife.

RESPONSE: The primary purpose of the UIC Program is the protection of underground sources of drinking water. To EPA's knowledge, EPA's authority to regulate non-groundwater impacts by means of UIC permits has not been addressed in reported case law. However, discharge of fluids at the surface is regulated under the National Pollutant Discharge Elimination System (NPDES) program. In addition, if EPA learns of any problems that could endanger surface waters or shallow ground water zones, EPA could seek appropriate relief to the extent allowed by applicable statutes and regulations, e.g., Section 1431 of the Safe Drinking Water Act (SDWA). This relief would stipulate any monitoring and corrective action deemed necessary to eliminate the problem and prevent further occurrences. Notwithstanding the issuance of this permit, it will remain the permittee's responsibility to comply with all federal, state, and local environmental requirements. EPA's review of information on the proposed facility indicates that all storage tanks at the surface will be surrounded by berms for containing any accidental spillage. Proper maintenance of the facility, especially the unloading facility, will be an ongoing item for planned inspections. The permittee has specified that the major portion of fluids to be injected will be produced water from oil wells in the Altamont-Bluebell Field area, commingled with lesser amounts of nonhazardous fluids. No changes will be made to the permit.

COMMENT #15: Assurance of type of injectate. How does EPA ensure that only "nonhazardous" waste products are disposed of? Is every load inspected or are the companies on their own?

RESPONSE: The requirement to submit a complete laboratory analysis of fluid wastes proposed for injection, prior to delivery to the well site, will assure that only nonhazardous fluids, as determined by RCRA regulations, will be approved for injection. Only fluids which are determined to be nonhazardous according to CFR 40 §261.3 will be approved for injection. Injection shall not take place without prior approval by the Director; approval may be granted verbally, with subsequent written approval from the Director. Also, see Comment #11.

COMMENT #16: Value of future oil rights. What happens to the possible value of any future oil rights within a 1/2-mile radius of the well? Isn't it true that oil companies avoid drilling near known disposal areas?

RESPONSE: The proposed injection interval in the Ute #1-14B1E is within a depleted oil zone. Injection of produced water from other wells in the Altamont-Bluebell Field area, plus nonhazardous waste fluids, will have no effect on formation fluids (hydrocarbons and/or brine) beyond a 1/2-mile radius of the well.

COMMENT #17: Typographical errors in draft permit. There were a few typo's: (a) On page 9 of the permit [Part II (C) 2 (a)], the 10th line down: "corrosive" should be "corrosion" (b) On page 12 of the permit [Part II (C) 6], under "For nonhazardous fluid sources" (b): Delete "EP" everywhere it occurs and add "Characteristic" after "Toxicity".

RESPONSE: Typographical error (corrosive to corrosion) has been corrected in the final permit. Reference to "EP" will be removed from the permit, with analysis of corrosivity, toxicity, ignitability, and reactivity retained. Additional substances to be analyzed are chromium, lead, and cadmium.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS <small>Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.</small>		5. Lease Designation and Serial Number: None
1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER:		6. If Indian, Allottee or Tribe Name: Ute Tribe
2. Name of Operator: Arrow Mud c/o David L. Allin		7. Unit Agreement Name: None
3. Address and Telephone Number: 660 N. Columbus Street, SLC, UT 84103-2117 801-521-0215		8. Well Name and Number: Ute SWD 1-14B1E
4. Location of Well Footages: 1522' FEL, 735' FNL QQ, Sec., T., R., M.: NWNE Section 14, T 2 S, R 1 E, USM		9. API Well Number: 43-047-30774
		10. Field and Pool, or Wildcat: Bluebell East
County: Uintah State: Utah		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA																											
<p style="text-align: center;">NOTICE OF INTENT (Submit in Duplicate)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Recompletion</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Multiple Completion</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Other _____</td> </tr> </table> <p>Approximate date work will start _____</p>	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____		<p style="text-align: center;">SUBSEQUENT REPORT (Submit Original Form Only)</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment *</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td colspan="2"><input checked="" type="checkbox"/> Other Annual Status Report for shut in well.</td> </tr> </table> <p>Date of work completion _____</p> <p><small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.</small></p> <p><small>* Must be accompanied by a cement verification report.</small></p>	<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off	<input checked="" type="checkbox"/> Other Annual Status Report for shut in well.	
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12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This well has been shut in for several years and did not produce any oil, gas, or water during 1993. The well was approved by the EPA for conversion to salt water disposal use with Permit No. UT1645-03728 which was issued in August of this year. By next June, this well will be recompleted for uses under that permit and will cease to be classified as an oil well.

13.		David L. Allin	Title: Agent for Arrow Mud	Date: 12/14/93
Name & Signature: _____				

(This space for State use only)

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
355 West North Temple, 3 Trnd, Suite 350, Salt Lake City, UT 84180-1203

Page 1 of 1

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

OCT 3 1994

UTAH ACCOUNT NUMBER: N2350

FRANK ARROWCHIS

~~ARROW MUD~~

PO BOX 127

WHITEROCKS UT 84085

REPORT PERIOD (MONTH/YEAR): 9 / 94

AMENDED REPORT ☐ (Highlight Changes)

Well Name			Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location				OIL(BBL)	GAS(MCF)	WATER(BBL)
UTE TRIBAL 1-14-B1E								
4304730774	04521	02S 01E 14	GR-WS	Solw	0	0	0	0
* "Non Mineral Agreement"							B/m Kernal	11-17-94
#941117 Dept. of Commerce "Arrow Disposed Inc."						0	0	0
eff. 9/94 #1 00167177								
TOTALS						0	0	0

COMMENTS:

We went into the hole to presser test to see if we could start our Disposal. there was problems so the operation is on hold. However the "Ute tribe" held off 450 BBL's. it was their oil and I have no idea where it went.

I hereby certify that this report is true and complete to the best of my knowledge.

Date: Oct. 20 - 1994

Name and Signature:

Gleada Arrowchis - Glenda Arrowchis
Arrow Disposal.

Telephone Number:

901-353-4378

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

- ☐ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator ☒ Operator Name Change Only

1- LAC/GIT
2- LWP/7-PL
3- DTS-8-SJV
4- VLC 9-FILE
5- RJF
6- LWP

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 9/94)

TO (new operator)	ARROW DISPOSAL, INC.	FROM (former operator)	ARROW MUD
(address)	PO BOX 127	(address)	PO BOX 127
	WHITEROCKS UT 84085		WHITEROCKS UT 84085
	GLEND A ARROWCHIS		GLEND A ARROWCHIS
phone	(801) 353-4378	phone	(801) 353-4378
account no.	N 2350	account no.	N2350

Well(s) (attach additional page if needed):

Name: UTE TRIBAL 1-14-B1E	API: 43-047-30774	Entity: 4521	Sec 14 Twp 2S Rng 1E	Lease Type INDIAN
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____
Name: _____	API: _____	Entity: _____	Sec _____ Twp _____ Rng _____	Lease Type: _____

OPERATOR CHANGE DOCUMENTATION

N/A 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).

Lec 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). *(Rec'd 10-31-94)*

Lec 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? *(yes/no)* ____ If yes, show company file number: *#20167177 (eff. 9/94)*

Lec 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of Federal and Indian well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. *(11-17-94)*

Lec 6. Cardex file has been updated for each well listed above. *12-14-94*

Lec 7. Well file labels have been updated for each well listed above. *12-14-94*

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission.

Lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- lec* 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- N/A* 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- N/A* 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- ___ 2. A copy of this form has been placed in the new and former operators' bond files.
- ___ 3. The former operator has requested a release of liability from their bond (yes/no) _____. Today's date _____ 19____. If yes, division response was made by letter dated _____ 19____.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- N/A* 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19____, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- N/A* 2. Copies of documents have been sent to State Lands for changes involving State leases.

FILMING

- ☒ 1. All attachments to this form have been microfilmed. Date: December 21 1994.

FILING

- ___ 1. Copies of all attachments to this form have been filed in each well file.
- ___ 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

941117 Bm/Vernal Open Arrow Disposal Inc. "Non mineral Agreement"



State of Utah

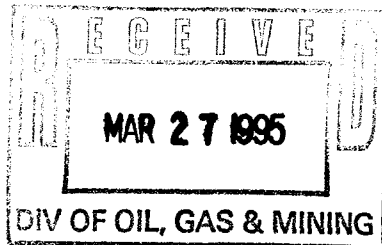
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Michael O. Leavitt
Governor

Dianne R. Nielson, Ph.D.
Executive Director

Don A. Ostler, P.E.
Director

288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870
(801) 538-6146 Voice
(801) 538-6016 Fax
(801) 536-4414 T.D.D.



March 22, 1995

John Carson
U. S. Environmental Protection Agency
UIC Implementation Section, 8WM-DW
999 18th Street, Suite 500
Denver, Colorado 80202-2466

Re: Arrow Mud Final Class V Injection Well
Permit (EPA Permit Number UT5645-
03728)

Dear Mr. Carson:

We have received and reviewed a copy of the final Arrow Mud Class "V" Injection Well Permit referenced above. While some of our previous concerns regarding this facility have been alleviated by EPA in the final permit, others have not. In fact, a new item of concern has appeared in the final permit, that of allowing a surface injection pressure 3 psig above the calculated injection zone fracture pressure. We feel that just the opposite should be the case, that surface injection pressure should be limited to 75% of the calculated injection zone fracture pressure in order to have a safety factor. Major remaining concerns include:

1. Allowing mechanical integrity tests (MIT's) subsequent to the initial one to substitute a temperature log for the radioactive tracer survey. A temperature log alone has limitations which a radioactive tracer survey does not, such as less sensitivity to small leaks. Due to the fact that this Class V well may inject very toxic substances, both logs should continue to be required to be run, as is required by EPA in mechanical integrity tests of Class I Hazardous injection wells.
2. Lack of any ground water monitoring requirement. It would seem prudent to at least require some monitoring of the upper USDW (background and post-injection) in order to determine whether injectate or formation fluids were in fact getting past the upper



confining zone(s) or well casing above the upper confining zone(s). Upper USDW monitoring should be a permit requirement, with analyzed parameters reflecting injectate contaminants, especially in light of the fact that there is approximately 3400 feet of uncemented casing adjacent to the USDW.

3. Requiring only one load in four from all sources to be analyzed for solvents, metals, etc. prior to delivery (for wastes which may vary in composition). This would seem to be an imprudent requirement for sources which have not yet proven to be consistent in the quality of their waste.

Further, random sampling/analysis of wastes accepted by the Permittee should be done prior to commingling, and should include F-solvents. Otherwise, dilution may mask a hazardous load of waste, or a resulting hazardous analysis may be untraceable to the responsible party.

Although the final permit was issued, it was felt that these unresolved issues be preserved for historical purposes.

Sincerely,



Fred C. Pehrson, P.E., Manager
Permits, Compliance & Monitoring Branch

FCP:JJ:wfm

cc: Dianne Nielson, Executive Director, DEQ
Joseph Shaffer, Uintah Basin District Health Dept.
Ted Allen, District Engineer
Dan Jackson, EPA Region VIII
Utah Division of Oil, Gas and Mining /
Utah Division of Solid and Hazardous Waste



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8P2-W-GW

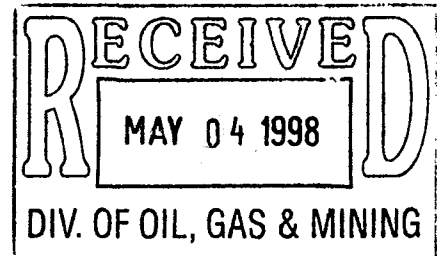
APR 30 1998

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Frank Arrowchis, Prop
Arrow Mud
P.O. Box 127
Whiterocks, UT 8408

*NOT
IN SECTION
11-3-04*

INJECTION CONTROL (UIC)
Class V Permit
Industrial Waste Well
f Section 14, T2S-R1E
T5645-03728
Uintah County, UT




Dear Mr. Arrowchis:

The purpose of this letter is to notify Arrow Mud that the UIC permit for the conversion of the Ute #1-14B1E to a Class V industrial waste disposal well is no longer in effect, and is being removed from our inventory. A final Class V Permit for this proposed injection well was issued on January 24, 1995. Part II, Section A. 6. of the permit states that if the well is not converted within one (1) year from the effective date, the permit automatically expires; this section also includes the provision that once authorization to inject as a Class V well expires, the full permitting process, including opportunity for public comment, must be repeated before authorization to inject will be reissued.

As you are aware, this well is also permitted as a Class II salt water disposal well under permit #UT1645-03728, and remains in effect. This permit was recently granted a two-year extension to September 23, 1999, in order to provide adequate time during which to determine whether the well will be utilized as an injection well, or possibly a production well.

If you have any questions or comments concerning this action, you may contact John Carson at (303) 312-6203. Also, please direct all correspondence to the attention of John Carson at Mail Code 8ENF-T.

Sincerely,


Stephen S. Tuber
Director, Water Program
Office of Pollution Prevention,
State and Tribal Assistance



Printed on Recycled Paper



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

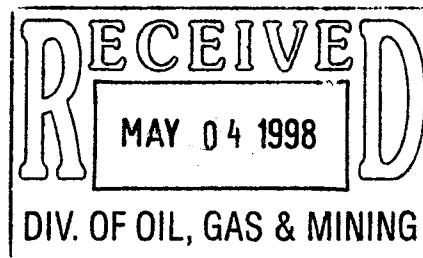
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8P2-W-GW

APR 30 1998

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Frank Arrowchis, Proprietor
Arrow Mud
P.O. Box 127
Whiterocks, UT 84085-0127



Re: UNDERGROUND INJECTION CONTROL (UIC)
Expiration of Class V Permit
Ute #1-14B1E Industrial Waste Well
NW1/4 NE1/4 of Section 14, T2S-R1E
EPA Permit #UT5645-03728
Uintah County, UT


Dear Mr. Arrowchis:

The purpose of this letter is to notify Arrow Mud that the UIC permit for the conversion of the Ute #1-14B1E to a Class V industrial waste disposal well is no longer in effect, and is being removed from our inventory. A final Class V Permit for this proposed injection well was issued on January 24, 1995. Part II, Section A. 6. of the permit states that if the well is not converted within one (1) year from the effective date, the permit automatically expires; this section also includes the provision that once authorization to inject as a Class V well expires, the full permitting process, including opportunity for public comment, must be repeated before authorization to inject will be reissued.

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Sincerely,


Stephen S. Tuber
Director, Water Program
Office of Pollution Prevention,
State and Tribal Assistance



Printed on Recycled Paper

cc: Mr. Ronald Wopsock, Chairman
Uintah & Ouray Business Committee

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Jerry Kenczka
BLM - Vernal District Office

Mr. Dennis Frederick, Section Manager
Utah Division of Water Quality

Mr. Gilbert Hunt
State of Utah Natural Resources
Division of Oil, Gas & Mining

8222

State
Arrowhead

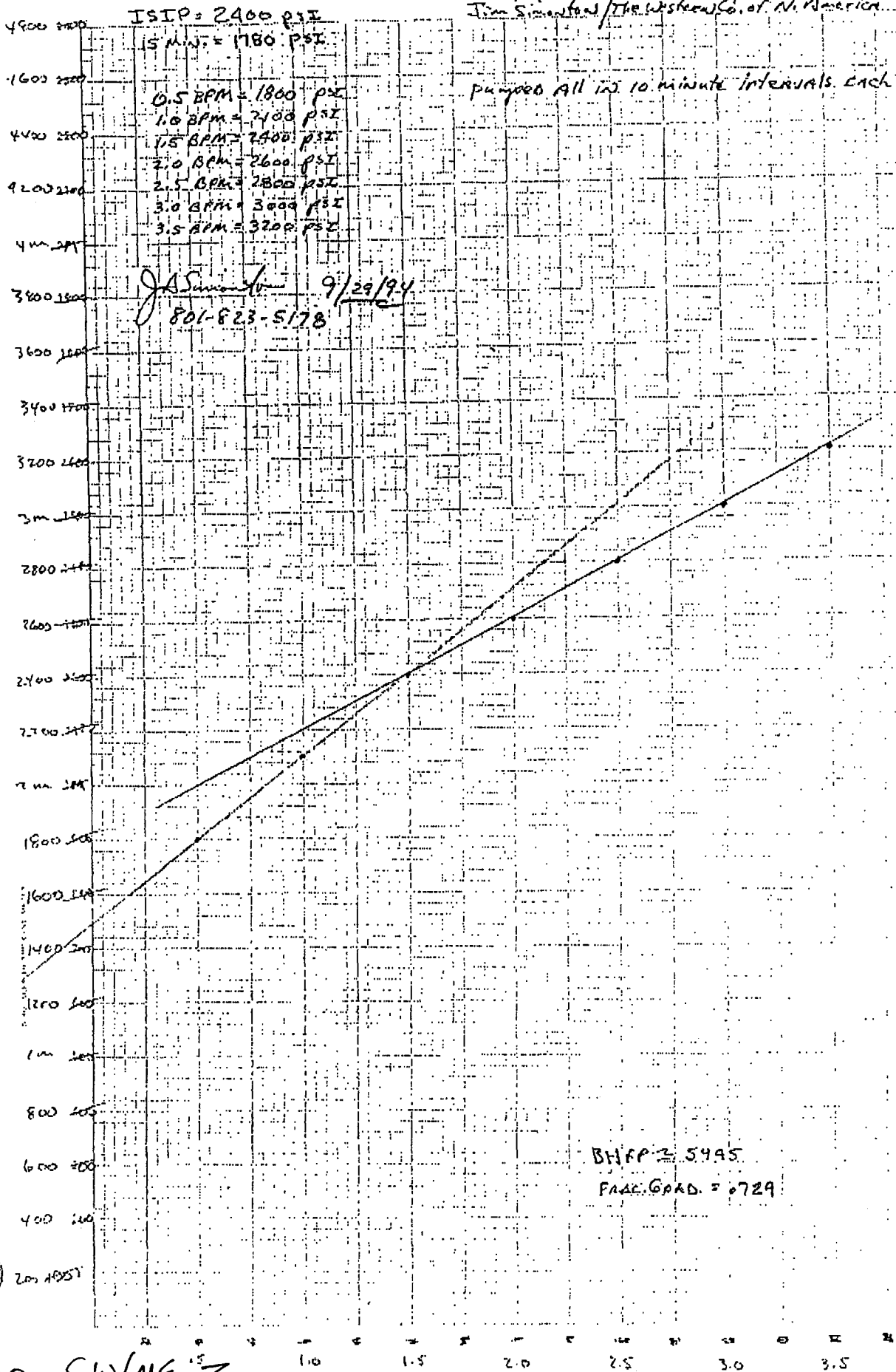
NO.18017229934

Ute Tribal 1-14 BIE
Step Rate Injection Test

Mar 02, 12 23:35 P.01

9/29/94

Jim Simonson/The Western Co. of N. America



El. 5320 SW/NE
Sec 11 } 1 mile N.

WELL PROFILE

OPERATOR Arrow Mud
 WELL # Ute Tribal 1-14816
 FIELD Bluebell East
 COUNTY Uintah Sec 14
 STATE Utah 2S 1E
 DATE 10/07/94

☐ NEW COMPLETION ☒ WORKOVER

	Casing	Liner	Tubing
SIZE	7 7/8"	5"	2 7/8"
WEIGHT	26.4 29.7	18"	6.5"
GRADE	J-55	N-80	USED
THREAD	LT-C		8" 10
DEPTH	1655'	11,840'	8061'

ITEM NO.

EQUIPMENT AND SERVICES

- 10 3/4" 40.5" K-55 @ 1655' & conn. w/ 1125 SXS (10/12/80)
- 7 5/8" 29.7" N-80 LT-C - 90 ft. (3701') & 7 7/8" 26.4" N-80 LT-C - 155 ft. (6231') - Total = 9923' - Lower 9910' Conn. w/ 630 SXS. 1st, 2nd SXS "H" - (12/1/80)
- 5" 18" N-80 - FJ & SFJ - hung in Baker liner hanger - 55 ft. - Set @ 11,890' - liner top @ 9705' (2.00 Lp) - Total SXS 2135' - Conn. w/ 1115 SXS. "H" - (12/27/80)
- 7 5/8" CTRP @ 9680' & conn. w/ 2 SXS. (9/24/94)
- 7 5/8" CTRP @ 8550' & conn. w/ 4 SXS. (9/24/94)
- 7 7/8" MSOT Cup type Ret. bridge plug @ 8092' (10/1/94)
- 259 ft. of 2 7/8" EUE 8" 16g. 6.5" - mixed string of 1650 ftg. originally in well & blue band tested to 7000 psc. - Note: All ftg. tested to 1000 psc hydrostatic w/ test sub & ball (8061')
- MSOT Retaining head on bottom of ftg.

COMMENTS:

PREPARED BY

Jim Simonton / Si's Consulting

OFFICE

Roosevelt-801-823-5178

PHONE

MOUNTAIN STATES
OIL TOOL

BHT = 193°

MONTHLY OIL AND GAS PRODUCTION REPORT

Operator Name and Address:

contact _____
company name Mountain Oil and Gas, Inc. *7 Corp*
address P.O. Box 1574
city Roosevelt state UT zip 84066

Utah Account Number: N2485

Report Period (Month/Year): Jun-2004

Amended Report ☐ (highlight changes)

Well Name API Number	Entity	Location	Producing Zone	Well Status	Well Type	Days Oper	Production Volumes		
							OIL (BBL)	GAS (MCF)	WATER (BBL)
Ute Tribal 1-14B1E 4304730774	4521	T 2S R 1E S 14	GR-W	P	O	1	10		
<i>Arrow Disposal</i>									
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
		T R S							
TOTALS									

Comments: _____

I hereby certify that this report is true and complete to the best of my knowledge.

Name & Signature: Craig Phillips

Date: 8/31/2004

Telephone Number: (435) 722-2992

RECEIVED

SEP 01 2004

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICE AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELLS

☒ Oil Well ☐ Gas Well ☐ Other

2. NAME OF OPERATOR

MOUNTAIN OIL AND GAS, INC.

3. ADDRESS OF OPERATOR

P.O. BOX 1574, ROOSEVELT, UT 84066

PHONE NUMBER

435-722-2992

4. LOCATION OF WELLS

TOWNSHIP 2S RANGE 1E SECTION 14 NWNE USBM

5. LEASE DESIGNATION AND SERIAL NUMBER:

14-20-H62-5022

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

UTE INDIAN TRIBE

7. UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER

UTE TRIBAL 1-14-B1E

9. API NUMBER:

43-047-30774

10. FIELD AND POOL, OR WILDCAT

65 BLUEBELL

COUNTY: UTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON	
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR	
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER CHANGE OF OPERATOR	
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE-DIFFERENT FORMATION		

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS, Clearly show all pertinent details including dates, depths, volumes, etc.

Effective APRIL 1, 2004, operation of this well was taken over by:

MOUNTAIN OIL AND GAS, INC.
P.O. BOX 1574
ROOSEVELT, UT 84066

N2485

The previous operator was:

ARROW DISPOSAL, INC.
WHITEROCKS, UTAH 84085
PO BOX 127

N2350

FRANK ARROWCHIS
PRESIDENT, ARROW DISPOSAL, INC.

Effective April 1, 2004 Mountain Oil & Gas, Inc. is responsible under the terms and conditions of the leases for operations conducted on the leased lands or a portion thereof under Mountain Oil & Gas Inc.'s Utah Letter of Credit _____ issued by _____

BIA BOND #0310275323

NAME (PLEASE PRINT) Craig Phillips

TITLE President, Mountain Oil and Gas, Inc.

SIGNATURE

DATE July 21, 2004

(This space for State use only)

APPROVED 10/28/04

Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(5/2000)

RECEIVED

SEP 08 2004

DIV. OF OIL, GAS & MINING

1. GLH

2. CDW

3. FILE

Designation of Agent/Operator

Merger

4/1/2004

TO: (New Operator):
N2485-Mountain Oil and Gas, Inc.
PO Box 1574
Roosevelt, UT 84066
Phone: 1-(435) 722-2992

Unit:

WELL(S)

[illegible]

OPERATOR CHANGES DOCUMENTATION

1. (R649-8-10) Sundry or legal documentation was received from the FORMER operator on:	<u>9/8/2004</u>
2. (R649-8-10) Sundry or legal documentation was received from the NEW operator on:	<u>9/8/2004</u>

3. The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 10/28/2004

4. Is the new operator registered in the State of Utah: YES Business Number: 5275257-0142

5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE

6b. Inspections of LA PA state/fee well sites complete on:	n/a
--	-----

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA not yet

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: not yet

9. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: not yet

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database** on: 10/28/2004
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 10/28/2004
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: n/a
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT 1208

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 310275323

FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a
2. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

OPERATOR CHANGE WORKSHEET

43,047,30774

ROUTING

1. DJJ

2. CDW

Change of Operator (Well Sold)

X - Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

1/1/2006

FROM: (Old Operator): N2485-Mountain Oil & Gas, Inc. PO Box 1776 Ballard, UT 84066 Phone: 1 (435) 722-2992	TO: (New Operator): N3130-Homeland Gas & Oil, Inc. PO Box 1776 Ballard, UT 84066 Phone: 1 (435) 722-2992
---	--

CA No.

Unit:

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED LIST								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 10/30/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 10/30/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 6/19/2006
- 4a. Is the new operator registered in the State of Utah: yes Business Number: 6174726-0143
- 5a. (R649-9-2) Waste Management Plan has been received on: Requested 10/31/06
- 5b. Inspections of LA PA state/fee well sites complete on: n/a
- 5c. Reports current for Production/Disposition & Sundries on:
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA not yet
- Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a
- Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 10/31/2006
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 10/31/2006
- Bond information entered in RBDMS on: 10/31/2006
- Fee/State wells attached to bond in RBDMS on: 10/31/2006
- Injection Projects to new operator in RBDMS on: n/a
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: 310279523
- Indian well(s) covered by Bond Number: SB-509795
- 3a. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number F16420
- 3b. The **FORMER** operator has requested a release of liability from their bond on: n/a

The Division sent response by letter on:

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 10/31/2006

COMMENTS: Homeland Gas and Oil, Inc was added as a principal on the Mountain Oil & Gas Inc Bond - no release possible. All wells moved to Homeland, except three "Stripper Wells".

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER see attached list
2. NAME OF OPERATOR Homeland Gas & Oil		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: see attached list
3. ADDRESS OF OPERATOR 3980 East Main, HWY 40 Ballard UT 84066		7. UNIT or CA AGREEMENT NAME: see attached list
4. LOCATION OF WELL FOOTAGES AT SURFACE see attached list		8. WELL NAME and NUMBER: see attached list
PHONE NUMBER: (435) 722-2992		9. API NUMBER: attached
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN		10. FIELD AND POOL, OR WILDCAT: STATE UTAH

11 CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

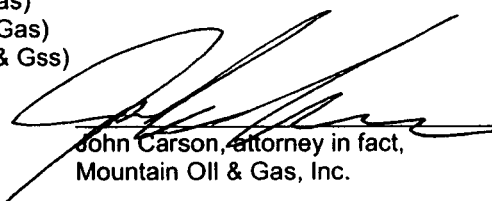
Effective January 1, 2006, operation of attached well list was taken over by:

Homeland Gas & Oil
3980 E Main ST HWY 40 N3130
Ballard, UT 84066

Previous operator was:

Mountain Oil & Gas
PO Box 1574 N2485
Roosevelt, UT 84066

BIA Bond: SB-509795 (to be transferred from Mountain Oil & Gas)
BLM Bond: 0310279523 (to be transferred from Mountain Oil & Gas)
SITLA Bond: Dated 09/14/04 (to be transferred from Mountain Oil & Gas)


John Carson, attorney in fact,
Mountain Oil & Gas, Inc.

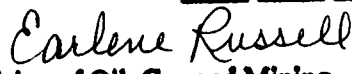
NAME (PLEASE PRINT) Paul McCulliss

TITLE Director

SIGNATURE 

DATE 10/26/06

(This space for State use only)

APPROVED 10/31/06

Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED

OCT 30 2006

DIV. OF OIL, GAS & MINING

well_name	sec	tpw	rng	api	entity	qtr_qtr	well	stat	lease	l_num
UTE TRIBAL 1-34B	34	010N	020W	4301310494	775	SWNE	OW	P	Indian	14-20-H62-1704
WESLEY BASTIAN FEE 1	08	010S	010W	4301310496	942	SWNE	OW	S	Fee	FEE
UTE TRIBE 1-13	13	050S	040W	4301320073	1225	SWSW	OW	P	Indian	14-20-H62-4894
UTE TRIBAL 2	08	010S	010W	4301330020	690	NWSW	OW	S	Indian	14-20-H62-2117
UTE TRIBAL 2-35B	35	010N	020W	4301330106	705	NWSE	OW	P	Indian	14-20-H62-1614
DUSTIN 1	22	020S	030W	4301330122	1092	NESW	OW	S	Fee	FEE
HANSEN 1	23	020S	030W	4301330161	1093	SENE	OW	P	Fee	FEE
UTE TRIBAL 1-26B	26	010N	020W	4301330168	715	SWNE	OW	P	Indian	INDIAN
MYRIN RANCH 1	20	020S	030W	4301330176	1091	SWNE	OW	S	Fee	FEE
KNIGHT 1	28	020S	030W	4301330184	1090	SENE	OW	S	Fee	FEE
UTE 1-12B6	12	020S	060W	4301330268	1866	SENE	OW	S	Indian	14-20-H62-4951
JOSIE 1-3B5	03	020S	050W	4301330273	215	SENE	OW	S	Fee	FEE
V MILES 1	20	010S	040W	4301330275	740	NWNE	OW	S	Fee	FEE
A RUST 2	22	010S	040W	4301330290	745	NENE	OW	S	Fee	FEE
SINK DRAW 7	21	030S	070W	4301330302	6360	SENE	OW	S	Indian	14-20-H62-1141
UTE TRIBAL 1-32Z1	32	010N	010W	4301330324	755	NESW	OW	S	Indian	14-20-H62-2457
REIMANN 10-1	10	040S	060W	4301330460	6410	NESW	OW	S	Fee	FEE
TEXACO TRIBAL 3-1	03	040S	060W	4301330468	10959	NWNE	OW	S	Indian	14-20-H62-1939
BATES 9-1	09	040S	060W	4301330469	530	SENE	OW	S	Fee	FEE
UTE 1-14D6	14	040S	060W	4301330480	5275	SWNE	OW	P	Indian	14-20-H62-4893
1-31C5	31	030S	050W	4301330501	2330	SENE	OW	P	Indian	14-20-H62-4890
JOSIE 1A-3B5	03	020S	050W	4301330677	216	NESW	OW	S	Fee	FEE
LAWSON 1-21A1	21	010S	010W	4301330738	935	NESW	OW	S	Fee	FEE
UTE TRIBAL 11-25	25	040S	030W	4301330743	2645	NESW	OW	S	Indian	14-20-H62-4892
UTE TRIBAL 16-2	02	050S	040W	4301330756	2610	SESE	OW	P	Indian	14-20-H62-3404
UTE TRIBAL 7-24	24	040S	030W	4301330768	2625	SWNE	OW	P	Indian	14-20-H62-4891
UTE TRIBAL 24-12	24	050S	040W	4301330830	9104	NWSW	OW	S	Indian	14-20-H62-4716
UTE TRIBAL 13-15X	13	050S	040W	4301330844	9100	SWSE	OW	S	Indian	14-20-H62-4715
GUSHER 2-17B1	17	020S	010W	4301330846	8436	NENE	OW	S	Fee	FEE
COYOTE UTE TRIBAL 10-9	09	040S	040W	4301330861	9900	NWSE	OW	S	Indian	1-109-IND-5351
BROWN 3-2	03	010S	020W	4301330986	10290	NWNW	GW	P	Fee	FEE
L E FONT 3-27Z2	27	010N	020W	4301331052	9464	SESE	OW	P	Indian	14-20-H62-4733
BADGER UTE H E MANN 2-28Z2	28	010N	020W	4301331053	9459	SWSE	OW	P	Indian	14-20-H62-4305
WALKER 2-24A5	24	010S	050W	4301331085	218	SESW	OW	S	Fee	FEE
DYE-HALL 2-21A1	21	010S	010W	4301331163	10713	SENE	OW	S	Fee	FEE
BASTIAN 3-8A1	08	010S	010W	4301331181	10758	NWSE	OW	P	Fee	FEE
RUST 3-22A4	22	010S	040W	4301331266	11194	NESW	OW	S	Fee	FEE
BEND UNIT 2	08	070S	220E	4304715416	2475	NENE	GW	S	Federal	U-0647
MONADA STATE 1	02	060S	190E	4304730080	11089	NWNW	OW	PA	State	ML-40730
UTE TRIBAL 1-16A1E	16	010S	010E	4304730231	780	SESE	OW	P	Indian	14-20-H62-4888
C J HACKFORD 1-23	23	010S	010E	4304730279	790	SENE	OW	S	Fee	FEE
UTE TRIBAL 1-14-B1E	14	020S	010E	4304730774	4521	NWNE	OW	P	Indian	14-20-H62-2931
RIVER JUNCTION 11-18	18	090S	200E	4304731316	9705	NESW	OW	S	Federal	U-27041A
BRENNAN FED 4-15	15	070S	200E	4304731332	9760	NESE	GW	S	Federal	U-14219
PENNY 16-7	07	090S	200E	4304731360	2680	SESE	OW	S	Federal	U-27041
HORSESHOE BEND 34-E	34	060S	210E	4304731595	10203	SWNW	OW	S	Federal	U-74499